H. Doc. 100-154

Economic Report of the President

Transmitted to the Congress
February 1988

TOGETHER WITH
THE ANNUAL REPORT
OF THE
COUNCIL OF ECONOMIC ADVISERS

UNITED STATES GOVERNMENT PRINTING OFFICE

WASHINGTON : 1988

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402

CONTENTS

Page

ECONOMIC REPORT OF THE PRESIDENT 1

ANNUAL REPORT OF THE COUNCIL OF ECONOMIC ADVISERS* 11

CHAPTER 1. THE U.S. ECONOMY: PERFORMANCE AND PROSPECTS . 19

CHAPTER 2. RISING EMPLOYMENT, PRODUCTIVITY, AND INCOME.... 57

CHAPTER 3. ADJUSTMENT AND GROWTH IN A CHANGING WORLD ECONOMY........................... 89

CHAPTER 4. EXPANDING TRADE AND AVOIDING PROTECTIONISM ... 127

CHAPTER 5. KNOWLEDGE, MARKETS, AND ECONOMIC PROGRESS.... 163

CHAPTER 6. AIRLINE DEREGULATION: MAINTAINING THE MOMENTUM 199

APPENDIX A. REPORT TO THE PRESIDENT ON THE ACTIVITIES OF THE COUNCIL OF ECONOMIC ADVISERS DURING 1987 231

APPENDIX B. STATISTICAL TABLES RELATING TO INCOME, EMPLOYMENT, AND PRODUCTION........................... 241

---

* *For a detailed table of contents of the Council's Report, see page 15.*

ECONOMIC REPORT
OF THE PRESIDENT

ECONOMIC REPORT OF THE PRESIDENT

TO THE CONGRESS OF THE UNITED STATES:

My first *Economic Report*, issued in 1982 after a year in office, could look only to the future for encouraging economic news. The task of rebuilding the economy was just beginning, and hard choices were being made. Inflation had begun to come down from double-digit rates, but America was mired in recession, its second in as many years. Today, however, we can point to real, solid economic progress. The policies of this Administration have spurred and sustained a record economic expansion—the longest in U.S. peacetime. Fifteen million new jobs have been created during this expansion, with strong gains widespread across industries and demographic groups. Real gross national product (GNP) has risen nearly 23 percent during these 5 years of growth.

And the accomplishments are not all in the past. Our policies will continue to contribute to rising standards of living in the years ahead. By enhancing private incentives and opportunities for work, investment, and entrepreneurship, we have laid the groundwork for growth far into the future. To ensure that the renewed energy of the private sector remains a force for growth, we must continue our efforts to bring down the Federal deficit through restraint on spending, to resist the siren song of protectionism, to support policies that foster noninflationary economic growth, and to rein in government when it threatens to make our markets less open, our industries less responsive, or our economy less flexible.

THE ECONOMIC EXPANSION

Since November 1982, the U.S. economy has grown without interruption and without a resurgence of inflation. Only twice before in our Nation's history—but never during peacetime—has recorded economic growth continued for so long. During the current expansion a strong increase in employment, combined with low rates of inflation and higher productivity growth, have meant rising standards of living for the American people.

Employment has increased dramatically, and all demographic groups have benefited. While overall employment has risen about 15 percent since November 1982, employment of blacks has increased by more than 25 percent and employment of Hispanics by more than 40 percent. Correspondingly, unemployment rates—especially among minorities—have fallen rapidly, although those rates are still unacceptably high. I believe that all who want jobs should be able to obtain employment commensurate with their skills and abilities.

As the unemployment rate has declined by almost one-half, some have claimed that the new jobs are low-quality, dead-end positions, while others have argued that booming employment has put us on the verge of another round of inflation. Neither view is accurate. The facts show that the strongest job growth has been in the higher paid, high-skill occupations. The bulk of the new jobs created have been full-time positions in occupations that pay well. While it is true that the number of jobs in manufacturing has risen more slowly than in the service-producing sector of the economy, this is a reflection of the innovation of American business and the skill of American workers, not a sign that the United States is "deindustrializing." The share of manufacturing output in total output actually has risen over the course of the expansion, and it is now above its postwar average. However, rapid increases in manufacturing productivity have meant slower growth in employment in this sector. This strong productivity growth, in combination with the downward adjustment of the dollar's exchange rate, has lifted the competitiveness of our products on world markets. Around the globe, products "Made in the U.S.A." are becoming more common and more sought after.

Moreover, I do not believe that our economy has yet reached its full potential, or that our economic growth threatens price stability. Growth can and should continue. With sound and stable economic policies, saving and investment will be encouraged, and the Nation's productive capacity will continue to expand. I remain committed to the goal of price level stability, and I view the decline in inflation during my Administration as a major accomplishment. I would not take lightly the prospect of a resurgence of inflation. But economic growth itself will not lead to a spiral of worsening inflation; only irresponsible economic policies would do that.

Our economic projections show inflation slowing during the coming years, even as output grows at a robust average annual rate of 3.2 percent. But continued economic progress requires that policymakers adhere to forward-looking principles, pursuing the long-term best interests of the Nation through a sustained commitment to growth and stability. The prospects for growth in the immediate future have been diminished somewhat by last year's plunge in the stock market, as well as by the increase in interest rates and tightening of monetary policy during 1987. Nevertheless, I anticipate that the U.S. economy will continue to post gains in 1988, as the expansion moves through its 6th year.

The past 5 years have marked an outstanding period of economic growth in the United States. It has been unusual in its longevity, unusual for the fact that inflation has remained subdued, and unusual relative to the performance of other industrial economies. Between 1982 and 1986, American businesses, large and small, created two and one-half times as many new jobs as Japan and the major industrial countries of Europe combined. In 1987 this trend appears to have continued, as the U.S. economy again generated new jobs at a remarkable rate. The U.S. unemployment rate has fallen 5 percentage points, and now stands well below those in most other major industrialized countries, where unemployment rates have yet to recover fully from the last recession. Overall, we have not lost jobs because of foreign trade. Instead, growth-oriented policies of lower and fairer taxes, reduced interference by government, and free and open international trade have been a source of strength for the economy. Indeed, the U.S. economy has flourished, and the outlook is full of promise.

THE ROLE OF GOVERNMENT IN THE ECONOMY

It is hard to believe that at the beginning of the 1980s the prevailing attitude toward the economy could best be described as despair. Inflation and interest rates had ratcheted higher with each successive business cycle, and, as the economy suffered through its second recession in 2 years, the goal of sustainable growth appeared increasingly elusive. Amid double-digit inflation and unemployment rates, there were calls for the Federal Government to do more and more, thereby compounding the failed policies of the past. Instead, I took government policy back to the basics, and the last 5 years of economic growth testify to the vitality of free markets and the productivity of the American people. Government intrusions in the Nation's economic life have been reduced, and the private sector has responded with an explosion of activity, creating new products and new jobs at a very rapid rate.

The Federal Government has an important role to play in the Nation's economy, but it is a limited role. As a general proposition, economic decisions should be left to the private sector, which has been our economy's strength throughout its history, or to State and local governments when the issues cannot be handled satisfactorily by the private sector. Only in issues truly national in scope is there a role for the Federal Government.

We have made efforts to restrain Federal spending, to limit it to only the government's vital functions, and those efforts have borne fruit. Last fiscal year, for the first time in 14 years, Federal outlays, after adjustment for inflation, declined. Government spending on goods and services absorbs resources that might be used better by the private sector, and any Federal outlay must be financed eventually by inflation or taxes. Because there is no free lunch, we must make the hard choices, funding only those programs that are in the best interest of the Nation, not those that happen to have the most influential lobbyists. For example, while a strong national defense is rightly the responsibility of the Federal Government, a continued proliferation of pork-barrel projects is not. America's sense of fair play is violated when hard-earned tax dollars are needlessly turned over to powerful special interests.

In the conduct of macroeconomic policies, we have turned away from the stop-and-go policies of the past. My Administration has adopted a long-term view that fiscal policy determines the division of economic activity between the public and private sectors and is not meant to respond to every rise and fall in the economic data. Similarly, monetary policy should provide adequate liquidity for sustained noninflationary growth. Together, these policies create a stable environment in which individuals and businesses can plan for the future and make the most of their economic opportunities.

For too long the Federal Government has interfered unnecessarily in private economic decisions. There is a legitimate, although limited, role for the Federal Government in certain industries—for example, in ensuring the safety and soundness of the Nation's banking and payments systems. But many government regulations impede the operation of markets, inhibit competition, or impose costs on firms and raise the prices faced by consumers, without providing commensurate benefits. Regulations that interfere with the efficient use of labor, investment, and raw materials ultimately reduce our productive potential, making this country worse off.

While my Administration has been successful in reducing many regulations and intrusions into markets, much remains to be done. We must lessen remaining disincentives to work, diminish the burden of Federal regulations, and dismantle government programs that needlessly subsidize inefficient producers. In particular, we must release financial institutions from outdated legal restraints, eliminate the remaining controls on interstate trucking, deregulate natural gas, and repeal mileage standards for new automobiles. We must resist appeals for even more government intervention that would introduce additional inefficiencies, such as requiring advance notification of layoffs and plant closings. With few exceptions, the private sector is best able to allocate resources to their most highly valued uses, and it should be allowed to do so without excessive paperwork and restrictions. That is why privatization, deregulation, and private sector initiatives have been important elements of my economic program. I believe in the inherent dynamism of the private sector, and I believe that the most constructive thing government usually can do is simply get out of the way.

THE INTERNATIONAL ENVIRONMENT

This Administration has been a force for economic change in the United States and, by our example, in the world at large. Our proven market-oriented policies are being adopted in more and more countries around the globe, as they recognize the high costs of big government and the harmful effects of stifling the entrepreneurial spirit.

In order to enhance growth and economic opportunity, many nations have followed our lead, undertaking reductions in sky-high tax rates that diminish incentives to work, save, and produce. In addition, tax reform is becoming a worldwide movement. Just as in the United States, tax reform abroad promises to end many distortions and inefficiencies, allowing businesses and individuals to make decisions about production and investment in order to increase their economic well-being, rather than simply to reduce their tax bills.

From continent to continent, the benefits of privatization and deregulation are becoming appreciated. Even China, and perhaps now even the Soviet Union, appear to be edging toward freer economic systems. Instead of viewing private enterprise as the adversary, many governments now see it as their best hope for progress and prosperity. Developing as well as industrialized nations are reducing market rigidities and interferences, thereby expanding economic freedom and opportunity for their citizens.

In those developing countries that encourage investment and private enterprise, the ensuing economic growth should contribute to lessening their debt problems. The debt burden carried by developing countries is not just their problem; we all have a vital interest in finding solutions that promote growth and protect open international financial markets. And we will continue to work with all who display a real determination to deal with this difficult issue.

The United States has been a constructive force in the world economy, not only by demonstrating the benefits of private enterprise, but also by our commitment to free trade and international economic cooperation. In addition, this Nation's strong demands for imports helped support output growth abroad during much of this decade. The world economy has become increasingly interdependent, as trade has multiplied and financial markets have become essentially global.

To continue to reap the benefits of an open international trading system, we are committed to reducing further the barriers that interfere with the free flow of goods, services, and capital. To this end, the United States has entered into, and will continue to seek out, bilateral and multilateral agreements to lower impediments to international commerce. The Free-Trade Agreement recently negotiated with Canada is an historic accomplishment. Once the necessary implementing legislation is passed, it will establish the largest international free-trade area in the world. At the same time, in the Uruguay Round of the multilateral negotiations under the General Agreement on Tariffs and Trade, we have been working to lower trade barriers worldwide. In that forum, we have placed special emphasis on eliminating spiraling subsidies to agricultural production and harmful barriers to agricultural imports, on establishing and enforcing adequate protections for intellectual property, on liberalizing trade in services, and on ensuring evenhanded treatment of foreign investment. Through these avenues and others, we will continue to pursue the goal of free and fair trade, which can only expand opportunity and prosperity both at home and abroad.

THE CHALLENGES AHEAD

The American people elected me to this office with a vision of a reinvigorated economy, and I have watched that vision become reality. The resurgence of America has confirmed my optimism. The accomplishments of the last 7 years should inspire us, but not blind us to the important challenges that remain.

Foremost among our challenges is the continued high level of Federal spending and the budget deficit. Federal receipts last year were $255 billion above their level in 1981; nevertheless, the deficit has nearly doubled since then, bloated by a $326 billion increase in outlays. Although we have succeeded recently in slowing the growth of spending, and the deficit declined by $71 billion in the last fiscal year, the deficit is still too large.

Recent progress in controlling Federal outlays notwithstanding, as a percent of GNP, outlays remain well above the postwar average. The government continues to spend too much, absorbing resources that could be put to better use by the private sector. There are several essential functions of the Federal Government, such as providing a strong national defense and ensuring an appropriate safety net for those in need, but in many areas the government's presence is oppressive and unnecessary.

Tax increases are not the key to eliminating the deficit. Some taxes are unavoidable—the necessary functions of the Federal Government must be paid for. But tax reform and the cuts that have been instituted in income tax rates represent successful efforts to find less distorting, less burdensome, and more equitable means of financing government. Undoing tax reform through tax increases would affect economic activity adversely by raising uncertainty about government policy and reducing incentives to work and produce. Rather, in coming years we should look to ways to enhance incentives for investment in future productive capacity, including reducing the tax rate on capital gains.

The Gramm-Rudman-Hollings law and our recent agreement with the Congress on a 2-year budget-trimming package have charted the course for additional deficit reduction. Those are steps in the right direction. But the budget process itself remains a major obstacle to eliminating the deficit. And I am not the only one to have noticed that the budget process is a disaster; a recent survey of Members of Congress identified it as a major source of frustration. The process is not working and it must be reformed; discipline and responsibility must be restored.

Current budget practice is to deliver a pair of mammoth bills that must be passed and signed in a matter of hours—or the government has to shut down. This is not responsible government, and I will not sign another of these behemoths. This budget process does not serve the best interests of the Nation, it does not allow sufficient review of spending priorities, and it undermines the checks and balances established by the Constitution.

So that such massive appropriations bills do not have to be an all-or-nothing proposition, I have asked for the line-item veto, a power that 43 State Governors already have. With a line-item veto, future Presidents could pare away waste and enforce budget discipline. In addition, expanded rescission powers would allow the Executive to cut unnecessary spending on programs that, in many cases, have outlived their usefulness. Finally, to ensure that balanced budgets become a permanent feature of our fiscal landscape, the legislatures of 32 States have asked for—and I endorse—a constitutional amendment to force the Federal Government to live within its means. These steps must be taken, because the current budget process is impeding budget progress. By its very nature, the democratic process is often messy and unfocused. But we know that democracy works and that tough decisions can be made. We must rise to the challenge again and prove that we can craft sound budgets through a sensible process.

We also must resist efforts to push the Nation into protectionism. Our foreign trade deficit is very large, but it has turned the corner in real terms. Last year foreign trade contributed significantly to our economic growth. Moreover, further improvements are on the way. At this point especially, it would be a tragic mistake to attempt to close the trade gap by closing our markets. Isolating U.S. markets could only lead to a global downward spiral in trade and economic activity.

My Administration is committed to working diligently with the Congress to draft responsible trade legislation, but if that legislation is not free of harmful protectionist measures, I will veto it. Our goal is to see the trade deficit reduced in an environment of sustained economic growth and low inflation. To this end, we are working with the other major industrial countries to coordinate economic policies that sustain noninflationary economic growth, encourage an orderly reduction of international imbalances, and thereby foster stability of exchange rates.

We must maintain the confidence of foreigners and our citizens alike in the ability of the United States to generate profitable investment opportunities and to follow responsible economic policies. The vitality of free and open markets, full of opportunity and promise, is the best foundation for investment. We must see to it that our tax structures and regulations do not discourage saving and investing. We must encourage investment not only in plant and equipment, but also in the American people themselves. Education, skills, research and development—these are some of the most fruitful areas for investment; expanded knowledge enhances the productive potential of our most valuable resource, our people.

CONCLUSION

America is blessed with great gifts—abundant land and natural resources, a diverse and hard-working people, an unshakable tradition of democratic values. My confidence in America has been shown to be well-founded over these past few years. The economy has been revitalized, and the record peacetime economic expansion has brought with it renewed opportunities and enhanced well-being. We set ourselves a formidable task: to reduce and to rationalize the role of government in the economy. That effort has been richly rewarded. During our watch, the U.S. economy again has shown its strength.

But our job is not finished. The Federal budget must be controlled in order to build a solid foundation for future economic growth. And I will not be satisfied until all Americans share in this prosperity; there are still too many enmeshed in poverty and without jobs. We must rise to our remaining challenges, heartened by our triumphs and inspired by the resilience of a resurgent America.

Ronald Reagan

THE WHITE HOUSE

FEBRUARY 19, 1988

THE ANNUAL REPORT
OF THE
COUNCIL OF ECONOMIC ADVISERS

LETTER OF TRANSMITTAL

COUNCIL OF ECONOMIC ADVISERS,
Washington, D.C., February 16, 1988.

MR. PRESIDENT:

The Council of Economic Advisers herewith submits its 1988 Annual Report in accordance with the provisions of the Employment Act of 1946 as amended by the Full Employment and Balanced Growth Act of 1978.

Sincerely,

Beryl W. Sprinkel

Beryl W. Sprinkel
Chairman

Thomas Gale Moore

Thomas Gale Moore
Member

Michael L. Mussa

Michael L. Mussa
Member

CONTENTS

Page

CHAPTER 1. THE U.S. ECONOMY: PERFORMANCE AND PROSPECTS . 19
- Overview of the Report ... 19
  - The Macroeconomic Setting ... 19
  - Employment, Productivity, and Income ... 20
  - External Imbalances ... 21
  - Opening Markets and Avoiding Protectionism ... 21
  - Knowledge and Progress ... 22
  - Airline Deregulation ... 23
- The U.S. Economy in 1987 ... 23
  - Sources of Demand ... 24
  - Inflation and Relative Price Changes ... 26
  - Industrial Composition ... 28
- Macroeconomic Policies ... 30
  - Fiscal Restraint ... 30
  - Monetary Policy ... 32
- The Break in the Stock Market ... 39
  - The Crash ... 40
  - The Economic Implications ... 41
  - The Policy Response ... 43
- The Economic Outlook ... 45
  - Forecast for 1988 ... 46
  - Projections for 1989–93 ... 49
  - Determinants of Growth 1988–93 ... 51
- Conclusion ... 55

CHAPTER 2. RISING EMPLOYMENT, PRODUCTIVITY, AND INCOME ... 57
- Employment and Output ... 58
  - The Breadth of Employment Gains ... 59
  - Changes in Job Quality ... 60
  - Shifts in Sectoral Output and Employment ... 61
  - Changing Patterns of Demand and Productivity ... 64
- Income and Productivity ... 66
  - Increases in Living Standards ... 67
  - Labor Compensation and Per Capita Income ... 69
  - Determinants of Productivity Growth ... 72
  - Sectoral Differences in Productivity Growth ... 72
  - Problems of Productivity Measurement ... 75

Page

Competition and Adjustment in Manufacturing 76
Unemployment and Inflation 79
Frictional Unemployment 80
Inflation and Unemployment Tradeoff 81
Prospects for Reducing Unemployment 84
Conclusion 87
CHAPTER 3. ADJUSTMENT AND GROWTH IN A CHANGING WORLD ECONOMY 89
The Significance of External Imbalances 91
Measures of the External Balance 91
Growth of Employment 94
Strength of Manufacturing 97
Growth of Foreign Debt 98
The Level of National Saving 99
Demand Growth and the Saving-Investment Balance 102
The Macroeconomic Character of the External Deficit 102
Differential Demand Growth 104
The Role of the Federal Deficit 109
Exchange Rates and Relative Prices 113
The Extent of Exchange-Rate Movements 113
The Dollar and Relative Export Prices 114
The Dollar and Relative Import Prices 117
Profit Margins and Import Prices 118
The Adjustment Process 123
Conclusion 125
CHAPTER 4. EXPANDING TRADE AND AVOIDING PROTECTIONISM.... 127
Expanding Trade Opportunities Abroad 128
Canada-United States Free-Trade Agreement 128
The United States-Mexico Framework Understanding . 137
General Agreement on Tariffs and Trade 138
The Protectionist Threat at Home 147
Protectionist Textile Legislation 149
Embracing Protectionism—The Omnibus Trade Bill ... 150
Conclusion 162
CHAPTER 5. KNOWLEDGE, MARKETS, AND ECONOMIC PROGRESS.... 163
Human Capital 165
Investments in Education, Training, and Work Experience 166
Rationales for Government Support 172
Policy Issues 173
Science and Innovation 177
Expenditures and Returns 178
Role of Government 182
Intellectual Property Rights 184

Page
Incentives in Government Research 185
Market Flexibility 186
Market Barriers and Distortions 187
Labor Market Flexibility 189
Policies for Labor Adjustment 192
Conclusion 196
CHAPTER 6. AIRLINE DEREGULATION: MAINTAINING THE MOMENTUM 199
The Regulatory Environment 200
Results of Deregulation 202
Lower Fares 203
Efficient Routing: The Hub and Spoke 203
Effects on Labor 205
Increases in Productivity, Profits, and Welfare 206
International Consequences 206
Managing the Increased Demand for Airspace 207
Safety 208
Delays 212
Making the System More Responsive and Efficient 215
Concerns About Market Organization and Monopoly 222
The Viability of New Entrants and Smaller Airlines 222
Mergers and Consolidation at Hubs 224
Computerized Reservation Systems 225
Airport Capacity Limits 227
Conclusion 229

APPENDIXES

A. Report to the President on the Activities of the Council of Economic Advisers During 1987 231
B. Statistical Tables Relating to Income, Employment, and Production 241

List of Tables and Charts

Tables

1-1. Growth of Real GNP and its Components, 1982-87 25
1-2. Economic Outlook for 1988 48
1-3. Administration Economic Assumptions, 1988-93 50
1-4. Accounting for Growth in Real GNP, 1948-93 52
2-1. Changes in Employment and Unemployment by Selected Demographic Groups, 1975-87 59
2-2. Growth in Real GNP per Capita and Productivity, 1948-87 67
2-3. Growth in Value Added per Hour Paid, 1948-86 73
2-4. Measures of Changes in Compensation and Wages, 1981-87 79

List of Tables and Charts—Continued

Tables

2–5. Regional Unemployment Rates, Selected Years, 1976–87 85
2–6. Unemployment by Reason and Duration, Selected Years, 1967–87 86
3–1. Economic Growth, 1982–87 96
3–2. Saving and Investment as Percent of GNP, 1949–87 100
3–3. Selected Real Net Exports, 1980–87 103
3–4. Growth in Real Domestic Demand and Real GNP in Major Industrial Countries, 1980–87 105
4–1. Canadian and U.S. Bilateral Tariffs by Sector 132
4–2. Agricultural Subsidies for Producers and Consumers, Selected Countries, 1979–86 143
4–3. Principal U.S. Trade Law Provisions 152
5–1. Relation of Income and Education, Selected Years, 1969–86 169

Charts

1–1. The Dollar and Real Net Exports 27
1–2. Wages and Prices 29
1–3. Federal Receipts and Outlays as Percent of GNP 31
1–4. Interest Rates and Velocity of Money 35
1–5. Weekly Interest Rates, 1987 37
2–1. Real Output and Employment Shares in Manufacturing . 65
2–2. Real Hourly Earnings and Compensation 70
2–3. Wage Inflation and Unemployment 82
3–1. Net Exports and the Current Account Balance 92
3–2. Unemployment Rates in the Seven Summit Countries 95
3–3. Components of the Saving-Investment Balance 110
3–4. Relative Prices of Exports and Imports and the Exchange Rate 116
3–5. U.S. and Foreign Exporters' Price-Cost Ratios and the Exchange Rate 120
4–1. Shares of U.S. & Canadian Merchandise Trade in 1986.. 129
4–2. U.S. Agricultural Exports 142
4–3. Contracting Spiral of World Trade 148
4–4. Trade Interventions 160
5–1. Years of Schooling of the Labor Force 167
5–2. Earnings by Age and Education 172
5–3. Research and Development Expenditures 179
5–4. Labor Force Shares by Industry 190
6–1. Airline Accident Rate 209

CHAPTER 1

The U.S. Economy: Performance and Prospects

THE LONGEST PEACETIME EXPANSION in the history of the U.S. economy entered its sixth year in 1987. Growth was vigorous, with the economy's real output rising by nearly 4 percent last year. Three million additional jobs were created in 1987, beyond the 12 million generated earlier in the expansion. The unemployment rate dropped almost a percentage point to its lowest level in 8 years. Significant improvement in the real trade deficit contributed importantly to growth of output and employment, for the first time since 1980. The inflation rate remained in the 4 percent range that has characterized most of the expansion—well down from the double-digit rates at the start of the decade. Dramatic progress was made in reducing the Federal budget deficit. Judged by these accomplishments, leaving aside the extraordinary events in financial markets, the U.S. economy enjoyed a good year in 1987.

OVERVIEW OF THE REPORT

The past 5 years of sustained and vigorous growth in production, income, and employment did not occur by accident. It was shaped by government policies explicitly directed toward fostering the inherent dynamism of the private sector. In reviewing the record of the current expansion and looking to the future, this *Report* highlights the appropriate role for government in the economy—its macroeconomic responsibilities, such as fiscal and monetary policy, as well as its microeconomic responsibilities, which concern particular markets and industries. This chapter begins with a summary of the *Report*.

THE MACROECONOMIC SETTING

Nineteen eighty-seven was a year of robust economic growth, strong increases in employment, and—despite a temporary acceleration early in the year—continued moderate inflation. The composition of demand changed in a welcome direction, as the foreign trade sector contributed to overall growth. But late in the year, the plunge in the stock market and a sharp buildup in inventories raised questions about the outlook. With appropriate economic policies, however, growth should continue through 1988—albeit at a more moderate rate than in 1987. A more balanced and sustainable pattern of growth in 1988 then will set the stage for a resumption of more rapid growth in the future, together with gradual reductions in both the unemployment and inflation rates.

Chapter 1 first reviews the macroeconomic performance of the United States in 1987 and the factors that shaped it. In particular, the chapter discusses the role of fiscal and monetary policy in fostering noninflationary growth and economic adjustment. During 1987 macroeconomic policies turned toward restraint: growth of the monetary aggregates slowed sharply, interest rates climbed, and the Federal budget deficit was cut by one-third. Partly as a result, inflation remained low and progress was made in reducing the trade deficit.

Important adjustments occurred in the U.S. economy last year. Real exports rose by nearly 17 percent, helping to turn business fixed investment around and to produce large gains in output and employment in the manufacturing sector. Consumer expenditure growth slowed significantly from the rapid pace set during the first 4 years of the expansion, restraining the increase in imports. Last year the U.S. economy enjoyed both trade deficit reduction and good growth; with appropriate policies, this combination can be expected to continue into the future.

EMPLOYMENT, PRODUCTIVITY, AND INCOME

The most important measures of economic progress concern people: the number of people with jobs; the productivity of each person; and real income per capita. Chapter 2 reviews the record of the current economic expansion with respect to such measures of well-being, and finds that, in both quantity and quality terms, the past 5 years of growth have been good ones. Genuine economic progress has been made, with benefits widespread across major demographic groups and across regions. Since 1982 the U.S. economy has created 15 million new jobs—the strongest record of employment growth among the major industrial countries. Unemployment rates have dropped substantially for all major demographic groups, with especially large improvements for blacks, Hispanics, and youths. The bulk of new jobs have been full-time and in higher paying occupations. Along with the rapid rise in employment, growth rates of both productivity and real per capita income have picked up, after a period of slow growth in the 1970s. Manufacturing has experienced particularly strong productivity growth, while retaining its traditional share in the value of total output. The Nation's industrial base remains strong.

Moreover, the expansion's accomplishments should continue to build, provided the Administration's growth-oriented economic policies are followed in the future. The unemployment rate has not reached a natural barrier beyond which further reductions necessarily imply serious risk of accelerating inflation.

EXTERNAL IMBALANCES

Since late 1986 the Nation's large trade deficit has been narrowing in real terms, contributing to output and employment growth in the United States. Chapter 3 discusses the significance of external imbalances—the problems they do and do not pose for the United States and the world economy. It then examines the forces behind the evolution of worldwide imbalances, as well as the processes that are under way to reduce them.

In assessing the significance of the country's external deficit, the chapter finds that, because of strong demand growth within the U.S. economy, the widening trade gap did not impair overall employment growth. Nor did it cripple the manufacturing sector. Moreover, U.S. investment was aided by substantial net inflows of foreign capital which offset a relatively low national saving rate. The buildup of net foreign claims on the United States remains modest relative to U.S. income and wealth, and future problems arising from a continued rapid buildup can be forestalled by adequate progress in reducing the external deficit.

To sustain such progress, it is essential that the fundamental macroeconomic causes of worldwide imbalances continue to be addressed. A substantial reduction in the foreign exchange value of the dollar has helped to restore the international competitiveness of U.S. industry, and it is a major factor in the turnaround and expected further improvement in the real trade deficit. To maintain noninflationary growth in the world economy while external imbalances are being corrected, it is vital that Federal deficit reduction continue in the United States, that internal growth in foreign countries remains strong, and that markets function freely and flexibly to bring about necessary structural adjustments here and abroad. It is equally vital that national markets remain open to international trade and that the world avoid a descent into protectionism.

OPENING MARKETS AND AVOIDING PROTECTIONISM

Chapter 4 amplifies the conclusion of the preceding chapter: protectionism is not the answer. Instead, economic progress here and around the world is enhanced by the benefits of further liberalizing international trade.

During 1987 significant progress was made toward a more open trading system. Chapter 4 discusses the steps taken in three important areas: the Free-Trade Agreement (FTA) with Canada; the United States-Mexico Framework Understanding; and the Uruguay Round of negotiations under the General Agreement on Tariffs and Trade (GATT). When approved, the FTA will culminate 140 years of efforts to establish free trade as the guiding principle governing what has become the world's largest commercial trading relationship between any two nations, thereby providing substantial and enduring benefits for businesses and consumers in both the United States and Canada. In the Uruguay Round, the United States is vigorously pursuing the proposals it has made to strengthen the free and fair trade principles of GATT and to broaden their application in services, investment, intellectual property, and agriculture.

At the same time, however, threats to trade liberalization have emerged within the United States. Pending legislation, while including some useful features, also contains numerous protectionist provisions. Enactment of these protectionist provisions would violate U.S. obligations under GATT, increase costs to consumers, damage relations with our trading partners, and invite retaliation. The United States has a choice: it can continue to lead the movement toward freer world trade, building on the progress of the last year, or it can turn inward, embracing protectionist measures that point only toward economic stagnation.

KNOWLEDGE AND PROGRESS

Chapter 5 examines three of the major factors that underlie rising living standards in the longer term and considers the role of government in supporting and sustaining economic progress. The chapter first examines investment in human capital, reviewing trends in schooling, training, and work experience, as well as their effects on earnings and output. It then discusses expenditures on research and development and their relationship to economic growth. Finally, the chapter reviews the importance of economic incentives and flexible markets in supporting economic progress by assuring that resources are directed toward their most highly valued uses.

The government has a constructive, but limited, role to play in ensuring that these building blocks of economic progress are strong. In education, government plays a large direct role, primarily at the State and local level where it can be most responsive to community needs. For investment in human capital and in research and development, government support is most effective when it relies on private incentives that guide such investment toward its most productive uses. To maintain economic incentives, government has an important responsibility to protect the rights of individuals to benefit from their own labor, investment, innovation, and entrepreneurship. Beyond this, the best role for government is often a minimal one—ensuring that it does not interfere with the efficient use of resources or introduce market barriers and distortions that impede productive economic activity.

AIRLINE DEREGULATION

The success of deregulation is well illustrated by the airline industry. The final chapter of this *Report* focuses on the effects of the Airline Deregulation Act of 1978, which led to a surge in air travel as a result of lower fares and greater choice. Recently, however, more complaints about service and on-time performance, as well as safety concerns, have prompted calls for reregulation.

Reregulation would be a mistake. The benefits of having removed regulation of entry and pricing in the airline industry are clear. They are also sizable, on the order of $11 billion per year. Despite airline mergers and fears of monopoly pricing, competition remains vigorous. More air travel—a reflection of the very success of deregulation—unquestionably has meant more crowded skies and busier airports. However, the answer to this congestion is not less reliance on market forces, but more. Deregulation should be expanded to allow a greater role for market forces in the management of the Nation's airspace and airport services.

Concerns that air safety is being undermined by the increased competition of a deregulated environment are not supported by the facts. The rapid increase in airline business in the last 10 years has led to no deterioration in the safety of air travel; instead, the record is good and compares favorably with the period before 1978. More people are flying to more places than ever before, and they are traveling more safely.

THE U.S. ECONOMY IN 1987

U.S. economic growth strengthened in 1987, and the sources of growth shifted markedly. Starting in the fourth quarter of 1986, real gross national product (GNP) growth began to exceed domestic demand growth, as—for the first time in 7 years—the foreign trade sector contributed on a sustained basis to economic growth in the United States. On the inflation front, the increase in consumer prices moved up into the 5 percent range early in 1987, spurred largely by the rebound in world petroleum prices. Non-oil import prices, which had tended to restrain inflation during the first half of the 1980s, also contributed upward pressure on consumer prices. But this acceleration, which largely reflected a one-time shift in relative prices, proved short-lived, and inflation in the second half of the year fell back to the 4 percent rate that has characterized most of the current economic expansion.

SOURCES OF DEMAND

The economic expansion continued through 1987, and in October it claimed the record as the longest period of uninterrupted growth that the United States has experienced in peacetime. Ironically, the record was set just as the stock market's optimism was shaken, and the Dow Jones Industrial Average dropped more than 20 percent in a single day. Clearly, some stresses and imbalances had emerged during the expansion, but data on the real economy indicated that favorable adjustments were occurring, and that they were occurring within a context of continued growth. The trade deficit was narrowing in real terms, the Federal budget deficit had dropped by one-third, and business fixed investment was rebounding from its 1986 decline.

Real GNP grew 3.8 percent from the fourth quarter of 1986 through the fourth quarter of 1987, rising more than half again as fast as in the preceding year. But this acceleration was by no means uniform across components of demand. In fact, the largest component, personal consumption expenditures, slowed almost to a standstill, posting just a 0.6 percent rise after 4 consecutive years of 4-plus percent increases (Table 1-1). Similarly, investment in housing declined for the first time since 1981. While the growth of government purchases picked up slightly last year to 3.0 percent, the primary source of the acceleration in GNP was the rebound in three components that had been a drag on growth in 1986: net exports, business fixed investment, and inventories.

The strengthening of exports, the turnaround in business fixed investment, and the slower growth of consumer spending all were part of a welcome pattern of economic adjustment necessary to redress the major imbalances of the U.S. economy. The figures presented on the composition of output growth in 1987 were influenced importantly by the weakening of consumer expenditures and business fixed investment in the final quarter of last year, but the fundamental pattern was not altered. Combined with continued strong growth of production, the drop in consumer and nonresidential fixed investment demand at the end of 1987 meant a large increase in inventories, which consequently accounted for one-half of the total increase in real GNP last year.

Growth of real consumption expenditures was dampened by slower growth of real personal income in 1987. As a result of the faster rise

TABLE 1-1.—*Growth of Real GNP and Its Components, 1982–87*

Item	1982 IV to 1985 IV	1985 IV to 1986 IV	1986 IV to 1987 IV[1]
	Average annual percent change		
Real GNP	4.9	2.2	3.8
Domestic demand	6.3	2.7	3.2
Personal consumption expenditures	4.7	4.1	.6
Nonresidential fixed investment	9.7	−4.7	3.7
Residential fixed investment	15.8	12.5	−2.9
Government purchases of goods and services	4.5	2.4	3.0
Exports of goods and services	2.9	5.9	16.9
Imports of goods and services	15.2	8.9	8.2
	Contribution to real GNP growth in percentage points[2]		
Total change in real GNP	4.9	2.2	3.8
Final domestic demand	5.7	3.2	1.3
Change in inventories	.6	−.4	1.9
Net exports of goods and services	−1.5	−.6	.6

[1] Preliminary.
[2] Detail may not add to totals because of rounding.
Source: Department of Commerce, Bureau of Economic Analysis.

in consumer prices last year, the growth of real disposable personal income slowed to 2.0 percent. Within consumer expenditures, only spending on services recorded an increase. After rising 2.4 percent in 1986, real services expenditures increased 3.8 percent in 1987. By contrast, spending on durables and nondurables fell. Consumer spending on motor vehicles dropped 5.9 percent in 1987, reversing half of the 12 percent rise in the year before. With so many households having recently bought automobiles, fewer remained interested in and able to make a purchase in 1987. In general, purchases of motor vehicles have been highly volatile in recent years, as manufacturers have instituted on-again off-again incentive plans. These huge fluctuations in car sales—routine 40 percent annual rates of increase or decrease in a quarter—have induced large swings in the pattern of consumption expenditures, despite the fact that motor vehicles account for less than 10 percent of total consumer spending.

The housing sector was affected adversely last year as interest rates climbed. Real residential investment dropped 2.9 percent, a reversal from 1986 when it had soared 12.5 percent as interest rates on new 30-year mortgages had moved into the single digits for the first time in the 1980s. Early in 1987 mortgage rates continued to ease to a 9-year low of 9.0 percent, but then they turned higher and in mid-October peaked at nearly 11.6 percent. The plunge in the stock market then changed the financial landscape, and mortgage rates ended the year about 1 percentage point below their October highs. The impact of higher rates during most of last year was softened somewhat by a shift toward adjustable-rate financing, which accounted for more than half of all mortgage originations by early autumn. In addition, by most indications, inflation expectations picked up at times last year, so that the increase in real (inflation-adjusted) rates was not so large as that in nominal interest rates. In the multifamily sector, however, high vacancy rates and tax code changes that reduced the attractiveness of multifamily homes as tax shelters acted as added deterrents to new construction.

During 1987 business investment appeared influenced primarily by the strength of the economy—especially improved export prospects. Business fixed investment rose 3.7 percent, reversing most of the 4.7 percent decline of the preceding year.

Improved export demand was evident in sales, production, and employment figures. Real exports grew almost 17 percent last year, finally rebounding above their peak levels of 1980–81. The increased international competitiveness of U.S. products, owing to the drop in the dollar's exchange rate, rising manufacturing productivity, and moderate wage increases, lifted export sales. As a result, the external sector contributed significantly to GNP growth last year. Growth of imports, while well below the rates recorded during the early years of this expansion, remained relatively rapid. Imports increased more than 8 percent in real terms last year, as U.S. domestic demand picked up.

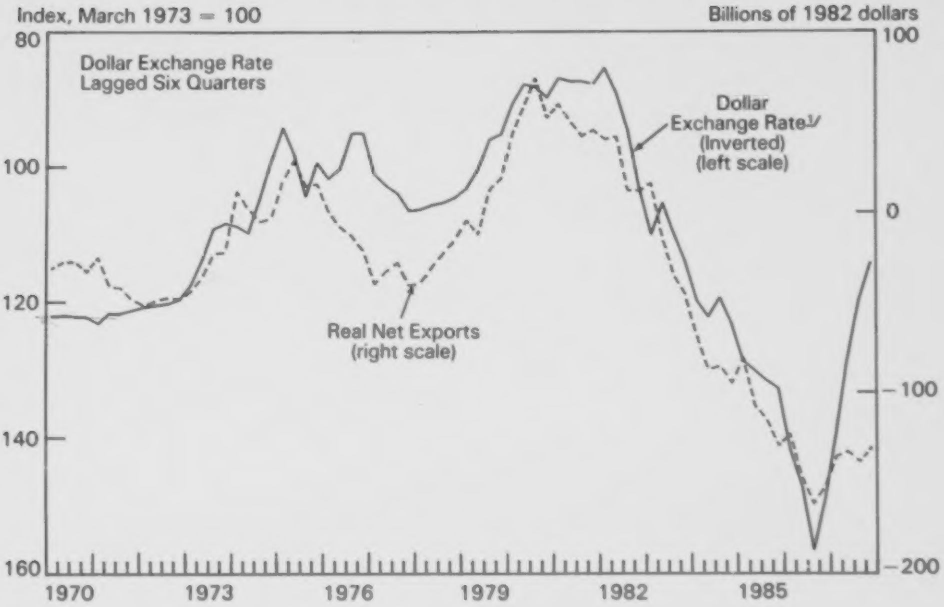
Although real domestic demand grew at a 3.2 percent rate last year, substantial progress was made in reducing the real external deficit. The improved net export performance stemmed primarily from relative price changes that made U.S. goods increasingly attractive both at home and abroad (Chart 1–1). In coming quarters these relative price changes should continue to improve the external balance. But even faster progress will be made if demand abroad strengthens, and if growth of U.S. domestic demand slows—preferably as a result of Federal spending restraint that narrows the budget deficit.

INFLATION AND RELATIVE PRICE CHANGES

The consumer price index (CPI) rose at more than a 5 percent annual rate during each of the first 4 months of 1987, but this initial acceleration did not herald a sustained resurgence of inflation. Last year the economy had to contend with significant increases in the prices of imports and energy—two categories that earlier in the economic expansion had tended to act as restraining influences on inflation. In addition, aided in part by the accommodative monetary policy of 1985–86, the economy was moving through a fifth year of growth, capacity utilization was rising, and the unemployment rate was continuing to fall. In similar circumstances in the 1970s, inflation had accelerated. But in 1987 most broad measures of inflation, al-

Chart 1-1

The Dollar and Real Net Exports



[1] Nominal multilateral trade-weighted value of the dollar against the currencies of the other G-10 countries plus Switzerland.

Sources: Department of Commerce and Board of Governors of the Federal Reserve System.

though up from 1986 when oil prices had dropped sharply, remained close to their averages for the first 3 years of the current expansion. For example, the GNP fixed-weighted price index rose 4.0 percent, compared with an average of 3.7 percent during 1983–85.

In 1986 crude oil prices had fluctuated wildly, dropping from more than $25 per barrel for West Texas Intermediate at the beginning of the year to a low of less than half that in July, then climbing back up to more than $18 per barrel around the end of the year. During 1987 the price of oil was less volatile, ending the year only a little below its level at the beginning of the year. The deflationary impact of the earlier drop in oil prices was completed at the retail level during 1986, as the energy component of the CPI declined almost 20 percent over the year. The inflationary effect of the subsequent rebound in oil prices, however, was strongest during the first 3 months of 1987, when the energy component of the CPI rose at a 26 percent annual rate. Thereafter, the energy component increased at about the same rate as the aggregate CPI.

In early 1987 the higher relative price of oil gave a one-time boost to the aggregate price level, with no apparent effect on the economy's underlying inflation rate. Similarly, the rising import prices of recent quarters are a relative price adjustment which should produce only transitory upward pressure on inflation. But, in the case of imports, the relative price adjustment is likely to be a more drawn-out process. Prices of non-oil imports have been rising more rapidly than overall inflation since the end of 1985, and they likely will continue to do so for several more quarters as the dollar's drop on foreign exchange markets gradually affects prices. A fixed-weighted index of non-oil import prices has increased at a 9 percent annual rate during the last 2 years.

Although the passthrough effects of the lower dollar can be expected to take some time, rising import prices nevertheless represent a one-time change in relative prices and are a necessary factor in reducing the Nation's trade deficit. Only if macroeconomic policies are unduly expansionary, and wage increases fully reflect the increases in import prices, will the increased relative price of imports turn into a sustained higher rate of inflation.

The increase in measured inflation early in 1987, in combination with the economy's stronger growth, may have contributed to slightly higher wage demands later in the year (Chart 1–2). Data on wage costs and average earnings indicate that wage increases bottomed out during the first half of the year and began to edge up during the second half. The acceleration was modest, however, and the 12-month change in wages remained in the 2.5 to 3.5 percent range. By most measures, the increase in wage costs last year was among the lowest of the postwar period, and the rise in unit labor costs, at 1.3 percent, was also relatively low.

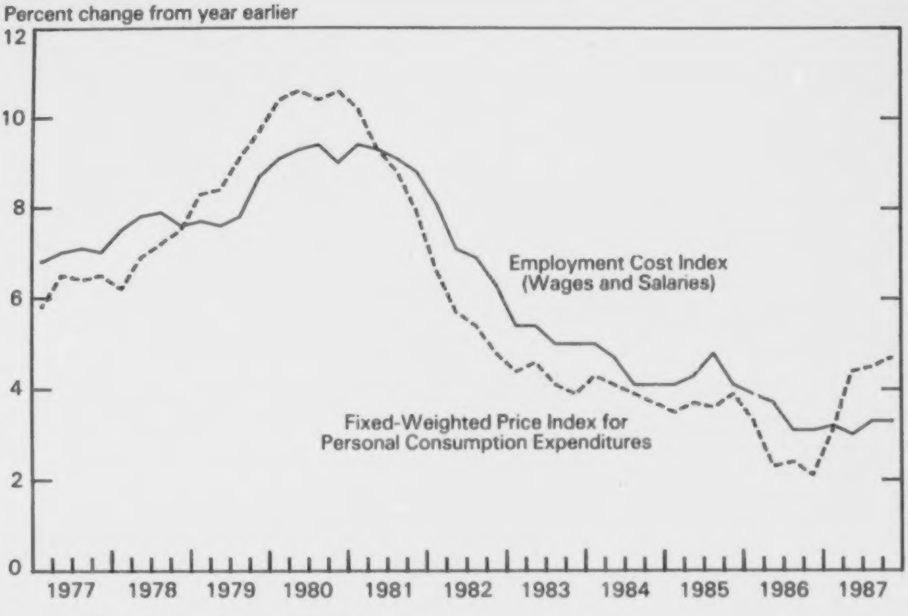
At times during 1987, inflation expectations appeared to flare up. Early in the spring, both the price of gold and interest rates rose sharply, apparently reflecting higher inflation expectations as broad indexes of commodity prices surged. Throughout much of the year the strong growth of industrial production also raised demand for inputs and put upward pressure on the prices of intermediate and crude goods, especially metals. In the 12 months through December, the producer price index for crude materials rose 8.8 percent, but this increase had little effect last year on the price index for finished producer goods, which rose just 2.2 percent.

INDUSTRIAL COMPOSITION

Along with the shifts in sources of demand and in relative prices last year, the sectoral composition of output also changed. After more than 2 years of sluggish increases, industrial output rose a

Chart 1-2

Wages and Prices



Note.—Data for fourth quarter 1987 are preliminary.
Sources: Department of Commerce and Department of Labor.

healthy 5.2 percent in the 12 months through December 1987. Some industries benefited from the surge in exports and the renewed competitiveness vis-a-vis imports, while others were aided by the strength of equipment investment. The rebound in oil prices encouraged activity in energy-related industries. And the agricultural sector appears to have improved, aided by government support as well as by stronger exports.

In 1987 the growth of goods production outpaced that of services by the widest margin since 1984. Similarly, after 2 years of declining employment, an additional 628,000 people were put to work last year in goods-producing industries. However, the predominant increase in employment remained in service-producing industries, where more than 2 million new jobs were created.

Among industries there were some remarkable reversals. Iron and steel production increased by nearly 30 percent in the 12 months through November 1987, having fallen about that much during the preceding 3 years. Similarly, the output of construction, mining, and farm equipment rose 18 percent through November, back to levels last reached in 1982. Oil and gas well drilling was another very strong component of industrial production in 1987; it increased by 37 percent, thereby retracing about half the drilling decline that had followed the collapse in oil prices at the end of 1985.

After a number of years of severe financial stress, agriculture may well have turned the corner. Farmland prices and net worth on farms rose in 1987, after declining in each of the preceding 7 years. Agricultural exports turned higher, crop prices rose, and huge stockpiles declined. In 1986 net farm income was at a high level as a result of record government transfers to farmers, high livestock prices, and low production expenses. In 1987 net income rose further, supported in addition by the strength of exports.

As the economic expansion continued through 1987, certain industries and sectors that had not fully participated in the recovery, or that had suffered setbacks more recently, were caught up in the spreading cycle of growth. Earlier in the expansion the high exchange rate had stymied export growth; but by 1987, after the dollar declined roughly 40 percent on the Federal Reserve Board's trade-weighted index from its peak in the first quarter of 1985, export-dependent industries (and those that compete with imports) regained some ground.

MACROECONOMIC POLICIES

Both fiscal and monetary policy turned toward restraint last year. The Federal deficit narrowed by one-third in fiscal 1987, and even on a cyclically adjusted basis—that is, abstracting from the deficit-reducing effect of faster economic growth—the restraint was clear. Moreover, measured either in real terms or as a share of GNP, Federal outlays fell below the level of the previous fiscal year. At the same time, rising interest rates and sharply lower money growth rates indicated a tightening of monetary policy during much of 1987.

FISCAL RESTRAINT

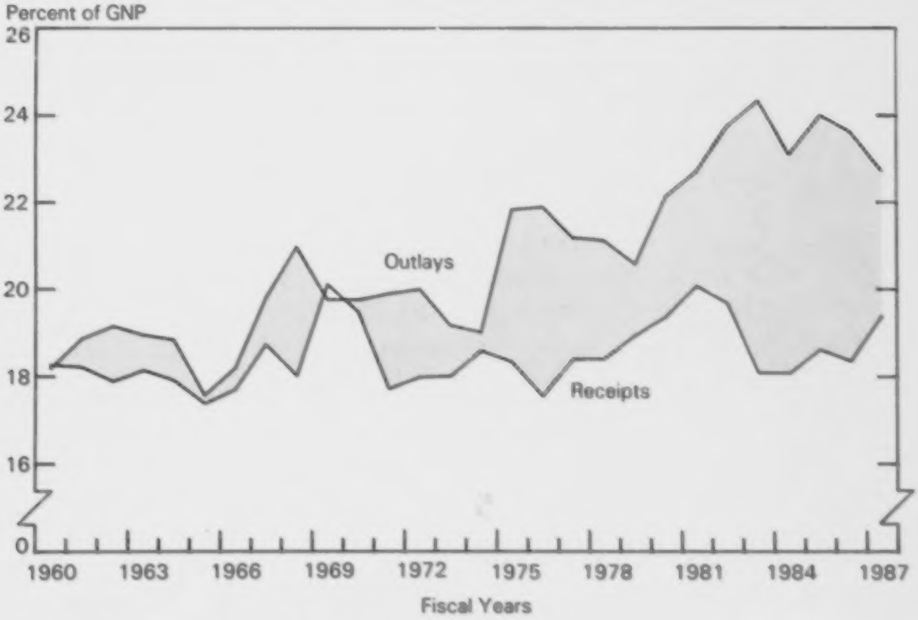
In fiscal 1987 the reduction in the Federal budget deficit was remarkable. The deficit was cut $71 billion, or 1.9 percent of GNP, in a single year. This salutary development reduced the government's demands on credit markets, while restraint on Federal spending released more resources for use by the private sector and, by holding down growth of domestic demand, contributed to the improvement in the Nation's real trade gap. Despite the contractionary impulse from fiscal policy last year—equivalent on a cyclically adjusted basis to roughly 1 percent of GNP—economic growth did not slow. The economy performed well in 1987, supported in part by the monetary stimulus of the preceding years and in part by the strong export growth that stemmed from a lower dollar.

A portion of the deficit decline was made up of one-time occurrences, such as loan asset sales, small changes in the timing of receipts and expenditures, and higher revenues due to the phase-in of the Tax Reform Act, but much was real, substantive deficit reduction. The Federal budget as measured by the national income and product accounts, which exclude some of these special factors, showed a $55 billion narrowing in the deficit in fiscal 1987.

The growth of total Federal outlays (both on- and off-budget) slowed to just 1.4 percent in fiscal 1987, which translated into the first inflation-adjusted decline in 14 years. Similarly, as a share of GNP, Federal outlays dropped to 22.8 percent, down from 23.6 percent in fiscal 1986 (Chart 1-3). Boosted by stronger economic growth and roughly $30 billion in additional revenues brought in by tax reform, total Federal receipts rose 11.1 percent in fiscal 1987. Federal revenues thus rose to 19.4 percent of GNP, 1 percentage point above the 1960–80 average.

Chart 1-3

Federal Receipts and Outlays as Percent of GNP



Note.—Includes on-budget and off-budget items.

Sources: Department of Commerce and Office of Management and Budget.

The fiscal 1987 deficit of $150 billion came close to the $144 billion target specified in the original Gramm-Rudman-Hollings (GRH) legislation passed in 1985. After the method of imposing automatic spending cuts in that law was found to be unconstitutional, amendments to GRH, with new enforcement mechanisms and new deficit targets, were signed into law in September 1987. The amendments extended the deadline for a balanced budget by 2 years to 1993, and they eased the deficit reduction requirements for fiscal 1988 and 1989 by providing "safe harbors" in the form of caps on the amount of cuts mandated. For fiscal 1988 the amendments exchanged a $108 billion target, as specified in the original act, for a new $144 billion target with a maximum automatic cut of $23 billion.

In October, as fiscal 1988 opened, the Federal budget for the year remained far from settled. A short-term continuing resolution kept the government operating, while lawmakers worked on appropriations and reconciliation legislation that would allow them to avoid the across-the-board spending cuts mandated by GRH. But the likelihood of agreement on a satisfactory budget package appeared to diminish as October progressed, making automatic cuts more likely. Automatic cuts are preferable to some alternatives—such as no deficit reduction at all, or higher taxes that undo the benefits of tax reform—but they have a serious drawback: they do not recognize priorities. In other words, programs that may legitimately merit more funds are cut just as much as those programs that may have outlived their usefulness. For fiscal 1988, automatic cuts were avoided eventually, but not until the stock market break had encouraged the parties involved in the budget-making process to reach an agreement.

MONETARY POLICY

During 1987 the Federal Reserve continued the eclectic approach that has characterized decisionmaking within the Nation's central bank in recent years. The creation of new deposit instruments, wide fluctuations in market interest rates, the deregulation of deposit rates, and the accelerated process of general financial innovation had raised questions about how movements in money and credit aggregates should be interpreted. As the 1980s progressed, the Federal Reserve had watched the historical relationships between money and income and interest rates apparently break down in response to these influences, and it came to rely less on the monetary aggregates and more on a wide range of economic and financial variables as indicators of emerging trends. Finally, in 1987 the Federal Reserve refrained from specifying an annual growth range for M1, the measure of money which in the past had been related most closely and reliably to income growth. Thus, for the first time since 1975—when the Federal Reserve began to set money targets publicly—neither a target nor a monitoring range for M1 was announced. And while target ranges for M2 and M3 (broader measures of money) were specified, the Federal Reserve's midyear report to the Congress explicitly recognized that "[in certain circumstances,] some shortfall from the annual ranges might well be appropriate."

In view of heightened uncertainty about the behavior of the monetary aggregates, the sharp slowing in money growth in 1987 did not alarm the Federal Reserve, as it continued to tighten policy through September. Annual rates of growth in the second and third quarters of 1987 averaged between just 2½ and 4½ percent for M1, M2, and M3. When measured from the fourth quarter of 1986, the growth rates were somewhat higher: through September, M1 grew at a 6.1 percent annual rate, M2 at a 4.2 percent rate, and M3 at 5.4 percent. Nevertheless, even these rates represented substantial decelerations from those in the preceding year, and left M2 well below, and M3 just below, their target growth ranges. M1A, which consists of currency and checking accounts that cannot pay interest, increased at less than a 2 percent annual rate through September, after having risen 10 percent in 1986.

Background

The lessened reliance on money as an indicator was an outgrowth of the experience of the 1980s, but especially of 1985-86. The Federal Reserve had begun to ease policy in the second half of 1984, reversing its earlier restraint in order to support the flagging economic expansion, and more than 2 years of falling interest rates and rapid money growth followed. From their peaks in mid-1984, most interest rates declined 5 to 6 percentage points by the end of 1986, and many short-term rates were cut in half. The monetary aggregates, especially the narrower aggregates, soared in 1985 and accelerated further in 1986. Over the four quarters of 1986, even the slowest growing of the commonly cited aggregates, M3, rose 8.9 percent, while the fastest growing measure, M1, ballooned 15.3 percent. By comparison, nominal GNP increased just 4.5 percent during the same period. In other words, by any measure, velocity (the ratio of nominal GNP to the money supply) dropped steeply in 1986.

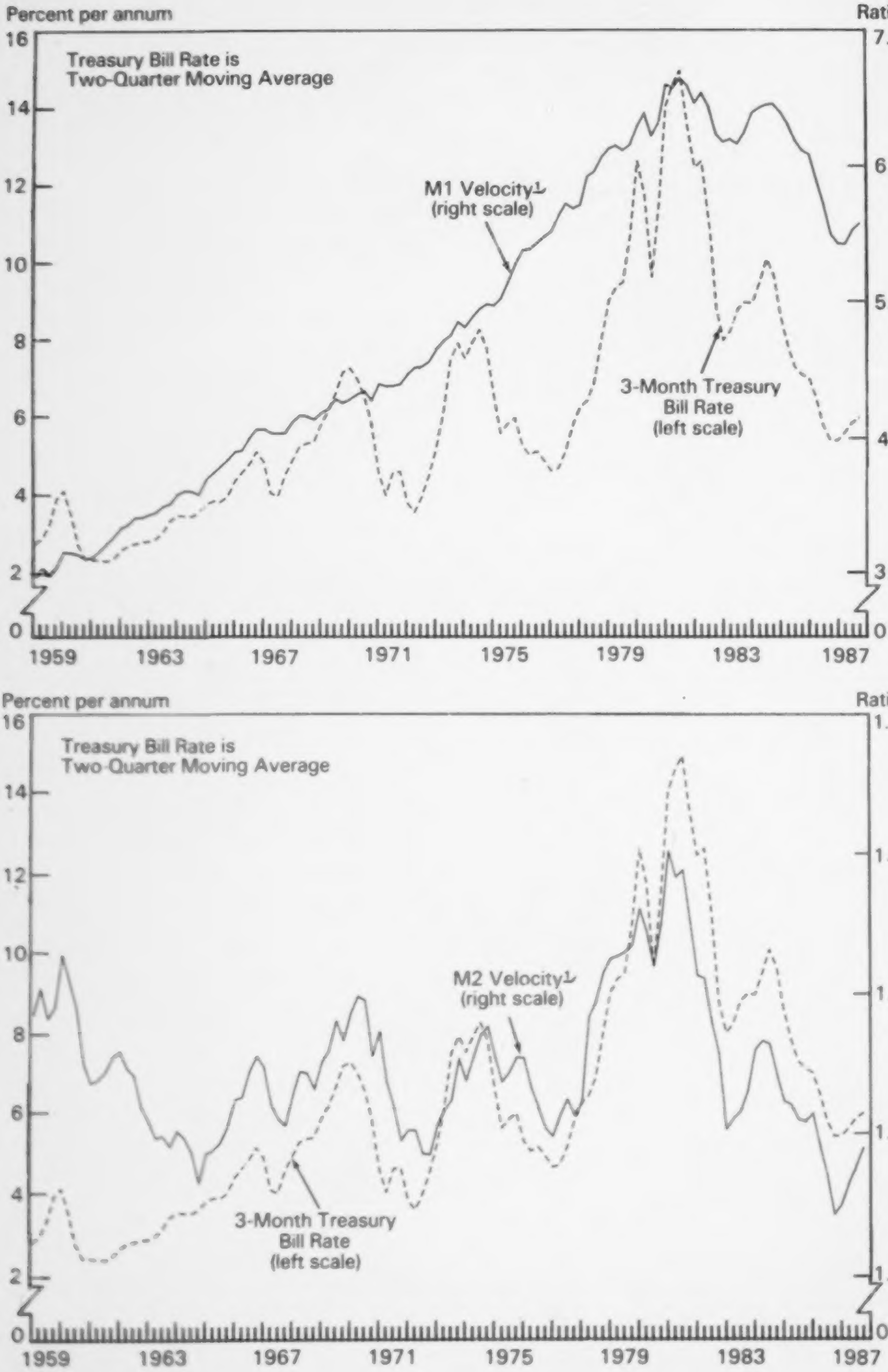
The decline in the velocity of M1, at 9.4 percent, was particularly steep and provided additional evidence that the relationship between that measure of money and income had shifted. The relationship between nominal GNP and M1, as summarized by velocity, apparently veered off track in the early 1980s (Chart 1–4). Rather than trending higher at a rate of roughly 3 percent a year as it had during the preceding 20 years, velocity declined on balance after 1981. There always had been some cyclical variations in velocity, with changes in interest rates altering the "opportunity cost" of holding idle balances. But the experience of the 1980s clearly was different. M1 velocity appeared to be responding far more emphatically than in the past to changes in market interest rates, while M2 velocity—although also affected—remained closer to its historical behavior.

The two most likely explanations for this increased interest rate responsiveness of money balances are deregulation and the sharpest disinflation since the late 1940s. The drop in inflation early in the 1980s fed through to expectations: as the public expects lower inflation, they tend to become more willing to hold money. Thus, to the extent that falling interest rates reflected declining inflation expectations, the disinflation/more-stable-purchasing-power argument provides an additional link between lower interest rates and increased demand for money.

Financial deregulation had its effect by changing the composition of the monetary aggregates. Interest-bearing transaction accounts were permitted, and interest rate caps were eliminated on all types of accounts except demand deposits, on which interest payments remained prohibited. In the case of M1, the shift in composition was profound: by 1986 interest-bearing deposits had grown to nearly one-third of M1 from a negligible share just 8 years earlier. As a result, the 1984–86 decline in market interest rates meant that, by the end of that period, the opportunity cost of a major component of M1 dropped below one-half percent. This opportunity cost, measured as the 3-month Treasury bill rate less the interest rate paid on negotiable order of withdrawal (NOW) accounts, was the lowest for any transaction account in 40 years. Such a narrow spread is clearly atypical; it developed in part because deposit rates on NOW accounts and other variable-rate accounts have adjusted relatively slowly to changes in market interest rates. This rate-setting behavior has accentuated the effect of variations in market rates on the demand for money.

Chart 1-4

Interest Rates and Velocity of Money



[1] Ratio of GNP to M1 or M2.

Sources: Department of the Treasury and Board of Governors of the Federal Reserve System.

Federal Reserve Actions in 1987: Before October 19

In 1987 monetary policymakers continued to face uncertainties concerning the strength of the economy, the extent of the inflationary threat, and the interpretation of movements in the monetary aggregates. Evaluating financial and economic indicators and predicting the precise effects of policy moves remain inexact sciences. On the domestic front, financial markets indicated that inflation expectations may have surged at times, although inflation itself exceeded the 4 percent range only briefly, early in the year. And on the international front, the value of the dollar came under pressure several times. Throughout the year, however, U.S. economic activity remained robust, and the unemployment rate dropped nearly a percentage point.

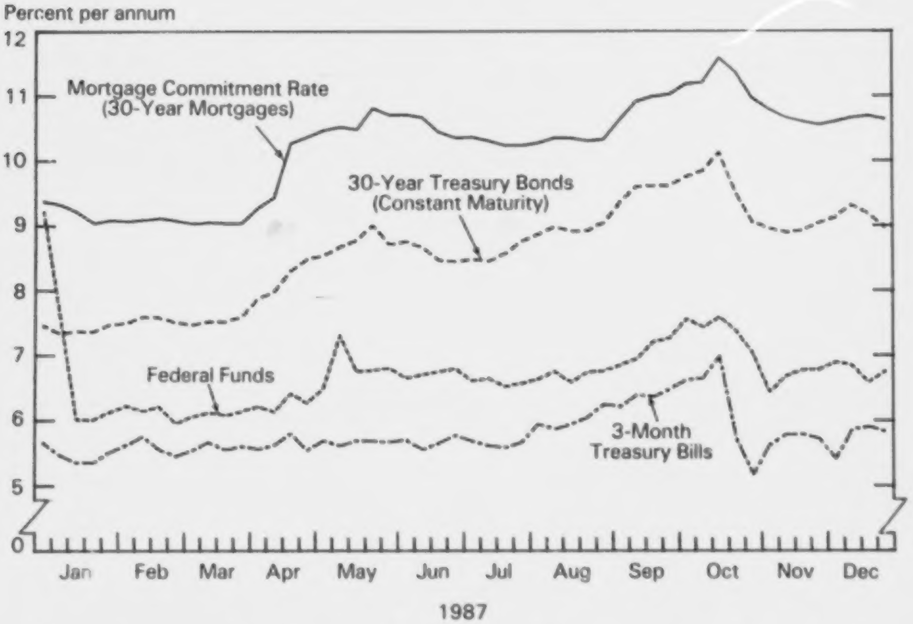
As 1987 began, the deciphering of economic and financial market trends was complicated by a year-end surge of transactions prompted by a change in tax laws. Because many provisions of the Tax Reform Act were to take effect at the turn of the year, individuals and businesses rushed to complete real estate transactions, mergers, sales of equities, car purchases, etc., before the end of 1986. In the process they generated huge demands for money and credit; for example, M1 rose at a 30.5 percent annual rate in December 1986, and business loans increased at a 36 percent rate.

In view of the difficulty in separating tax effects from underlying economic trends during this period, the Federal Open Market Committee (FOMC), the Federal Reserve's principal monetary policymaking body, chose not to make any substantive changes in its instructions to the Open Market Desk, which implements policy on a day-to-day basis. Thus the thrust of the directive that had been in place since the last discount rate cut in August 1986 remained in force. At the same time, however, the FOMC indicated its bias toward future tightening and noted that, at least with regard to M1, money growth would have to slow from the 1986 pace in order to sustain progress toward price stability.

As the year-end bulge in the monetary aggregates dissipated and the economy continued to grow at a moderate pace, the Federal Reserve made no explicit changes in monetary policy until late April. Then, in April and again in May, the market for bank reserves was tightened as policymakers responded to downward pressure on the dollar in exchange markets and a perceived ratcheting upward of inflation expectations. News on the real economy was generally good: growth was maintained, and the unemployment rate was dropping substantially. But the rebound in energy prices, with some help from higher import prices, had boosted the inflation rate above 5 percent, and expectations of inflation were heating up. While oil prices had roughly stabilized, broad indexes of commodity prices rose sharply in April and early May, as did the price of gold. Long-term interest rates also appeared to reflect an increase in inflation expectations: the rate on 30-year Treasury bonds increased 1½ percentage points in 2 months, to a peak of 9.0 percent (Chart 1-5). The dollar also told a similar story about expectations during this period, losing nearly 5 percent of its value on a trade-weighted basis in those 2 months.

Chart 1-5

Weekly Interest Rates, 1987



Sources: Department of the Treasury, Board of Governors of the Federal Reserve System, and Federal Home Loan Mortgage Corporation.

The Federal Reserve actions, complemented by measures taken abroad to ease policy, generally were successful in reassuring the domestic financial and foreign exchange markets. The dollar appreciated through mid-August, and interest rates remained below their highs of the spring. Meanwhile, the economy showed signs of additional strength, inflation dropped back from the elevated levels of early in the year, and wage increases remained subdued.

Under the influence of higher interest rates and tighter Federal Reserve policy, growth of the monetary aggregates continued to weaken. M1 rose at just a 2.7 percent annual rate in the 6 months through July, and M1A fell slightly, while M2 growth remained well below, and M3 just below, their 5½ to 8½ percent target ranges. To some, this sharp slowdown in money growth raised concerns about potential economic weakness.

In early September the Federal Reserve again tightened policy, both by restricting reserve availability further—which it did "in light of the potential for greater inflation, associated in part with weakness in the dollar"—and by raising the discount rate one-half percentage point to 6 percent. In the preceding 3 weeks the dollar had dropped nearly 5 percent on a trade-weighted basis, and interest rates had begun to move up very steeply in the last few days of August. Once again, foreign exchange markets apparently were reassured by the Federal Reserve's actions. The dollar stabilized, but this time interest rates continued to climb.

The spur for the dollar's drop and the bond market's weakness appears to have been the release in mid-August of the June foreign trade figures, which showed a $15.7 billion deficit—substantially worse than the markets had expected. With the trade deficit thus narrowing more slowly than anticipated, the financial markets surmised that further adjustments were required—either a lower dollar, reduced demand in the United States, or increased demand in our major trading partners. Against a background of rising interest rates abroad, and with little additional action expected to be taken to reduce the U.S. budget deficit or to augment demand abroad, attention focused on the foreign exchange market and U.S. interest rates. Specifically, a rise in U.S. interest rates appeared increasingly likely, perhaps reflecting expectations that further dollar depreciation would add to inflationary pressures. Higher rates also would have been expected to result from an effort to dampen business investment and consumer spending—and thereby U.S. imports, which would reduce the extent of the needed dollar decline.

The trade figures for the next 2 months also were worse than generally expected, and financial markets reacted adversely. On October 14, when the August data were released, the Dow Jones Industrial Average posted a 1-day drop of 3.8 percent, and the rate on 30-year Treasury bonds rose 20 basis points (0.20 percentage point). The dollar also declined, but by less than 1 percent. On balance between September 4 (when the discount rate was increased) and October 16, the trade-weighted value of the dollar remained unchanged, the Dow Jones Industrial Average dropped 12 percent, and interest rates rose 50-150 basis points.

The extent of Federal Reserve tightening through mid-October was most dramatic as measured by the sharp deceleration of money and reserve growth. In view of the relative looseness of money-GNP relationships in recent years, however, other indicators provide additional evidence on the stance of Federal Reserve policy. Judging by the level of the Federal funds rate in early October, the progressive tightening of monetary policy had effectively reversed most of the easing that had occurred during 1986. At their peaks, short-term interest rates had increased roughly 150-250 basis points since the beginning of the year, and long-term rates had risen a bit more than that. Although these nominal increases were offset in part by higher inflation expectations, real interest rates, which adjust for inflation expectations, also appear to have risen during 1987—albeit by a more modest amount than during some other periods of real rate increases in the 1980s. Two other variables that sometimes can be used as indicators of monetary policy did not appear to point to a tightening last year. In particular, the dollar's exchange rate declined on balance, and the yield spread between long- and short-term securities widened somewhat, rather than narrowing or even turning negative as it tends to do in periods of severe monetary policy restraint. Nevertheless, the balance of the evidence points to a tightening of monetary policy last year.

There is little question that a turn toward some restraint in 1987 was desirable; continued growth of money at the high rates experienced in 1985 and 1986 would have had inevitable inflationary consequences. With output growth apparently well-maintained and inflation expectations building at times, the Federal Reserve acted to forestall a resurgence of deep-rooted inflation and to retain hard-won gains toward price stability. As always, because monetary policy actions affect the economy with sizable lags, the tightening of policy last year had implications for future growth and price performance.

THE BREAK IN THE STOCK MARKET

As the third quarter ended, preliminary evidence suggested—and data later confirmed—that the U.S. economy was growing strongly. The unemployment rate continued to edge down, reaching its lowest level since late 1979, and the index of leading indicators pointed to sustained economic growth. However, the outlook for further substantial improvement in the Federal deficit was clouded by an apparent deadlock between the Congress and the Administration over the budget for fiscal 1988, which began October 1. In financial markets, the Federal Reserve had tightened monetary policy in September. Interest rates, both short- and long-term, rose further in the first weeks of October.

In mid-October the stock market posted a string of large declines, culminating in a 1-day plunge of unprecedented magnitude. The stock market had soared more than 40 percent in value from the start of the year through its August peak, but, by the close of business on October 16, nearly half of that gain had been erased. And the following Monday, October 19, after stock markets elsewhere in the world had posted sharp declines, the Dow Jones Industrial Average lost 22.6 percent in a single day. Trading volume was enormous, the markets were chaotic, many stocks opened very late, and the word "panic" aptly described the atmosphere. It was a worldwide phenomenon with potentially worldwide consequences.

On that 1 day, the total value of the stock market dropped by roughly half a trillion dollars. The next day, again amid an enormous volume of transactions, market conditions worsened. Trading in many stocks and index futures halted for a time, but the market managed to recover and closed higher. In subsequent days and weeks, investors remained nervous, but they drew reassurance from the Federal Reserve's prompt provision of liquidity and the large number of corporations announcing stock buy-backs. During the remainder of the year, the market settled into a trading range that left the Dow at the end of 1987 quite close to its year-earlier level.

A wide range of explanations for the crash has been offered, and many factors may have contributed. However, no political or economic event occurred between the market's close on Friday and on Monday that appears capable of explaining such a huge revaluation of the net worth of U.S. corporations. To an extent, the stock market appeared to be reacting simply to itself; in increasingly heavy trading on the preceding Wednesday, Thursday, and Friday, the Dow had lost a total of 261 points, and on October 19, as more individuals and institutions became aware of the deepening plunge in stocks that day and tried to sell, the decline cumulated.

A survey regarding the factors that had propelled stock prices downward was included in *The Report of the Presidential Task Force on Market Mechanisms*, which reviewed the stock market break. A majority of the market participants and other interested parties that responded to the survey viewed technical and psychological factors, especially "sheer panic," as the cause of the intense selling pressure on October 19. By contrast, fundamental factors, such as rising interest rates, overvaluation of the market, and the large trade and budget deficits, were described as the primary cause of the preceding week's decline.

Some commonly watched measures of stock values lend support to the proposition that stocks were overvalued before mid-October. Dividend yields on stocks were well below their postwar average, while price/earnings ratios had soared to highs attained only briefly in recent decades. Since the beginning of 1987, stock prices had skyrocketed amid reports of escalating corporate earnings and robust economic growth. But while stock prices were soaring, bond prices were dropping, creating an unusual divergence between the two markets. In a sense, on October 19 the stock market caught up with the bond market.

Rising interest rates certainly were a factor in the stock market's decline. As noted above, rates had risen sharply in the weeks preceding the crash, and one major bank announced another half percentage point hike in its prime rate on the Thursday before the plunge. Moreover, the outlook for even higher interest rates had been bolstered by the lack of improvement in the monthly U.S. trade figures. The slower-than-expected turnaround in the trade deficit implied to some that further adjustments—either to exchange rates or to foreign or domestic fiscal or monetary policies—would be necessary to stimulate U.S. exports and reduce U.S. import growth.

Several additional factors may have played a role in the market's decline. In particular, publication of the large trade deficits appeared to strengthen the position of those supporting protectionist trade legislation, the passage of which would seriously impair the ability of U.S. firms to do business abroad and would signal the abandonment of a longstanding U.S. commitment to an open trading system. There also were other indications that international economic policy cooperation might be endangered. In addition, the House Ways and Means Committee had just approved a tax package containing several items adversely affecting business, including a measure that would increase the cost of corporate takeovers.

THE ECONOMIC IMPLICATIONS

The damage to the financial system as a direct result of the stock market break was remarkably minor. Several brokerage firms closed their doors or merged with larger, better capitalized companies, a number of Wall Street firms announced layoffs, and the demand for portfolio insurance—which was supposed to provide a hedge against declining stocks—dropped off amid evidence that such insurance had failed to perform as expected.

Recent studies have provided much useful information concerning the events surrounding October 19. These studies deserve, and will receive, serious and careful attention. In response to the crash, however, it is important to avoid precipitous actions that might make financial markets less efficient and less flexible. The resilience of the financial system in the face of the unprecedented dive in stock prices can be read as eloquent testimony to the general adequacy of government regulations in this area. Regulatory authorities and market participants worked together effectively to ensure that, despite the large declines in stock prices, the financial system continued to function.

The implications of the market break for the economy, however, are harder to gauge and may ultimately be more serious, requiring a careful balance of macroeconomic policies to avoid the threat of an economic downturn. The stock market is a good, but not infallible, predictor of economic trends. While it is sufficiently reliable to be included in the Department of Commerce's index of leading indicators, it represents only 1 of 11 components in that index. The stock market tends to be overly pessimistic, erroneously predicting several additional recessions in the postwar period. But in those circumstances when a stock drop has not been followed by an economic downturn, it is often because economic policies have shifted direction, effectively preempting a recession. For example, in 1966, after the stock market had declined more than 20 percent, the Federal Reserve did an about-face, reversing much of its earlier tightening. The economy responded to the support, and a recession was avoided.

Stock prices are a leading indicator because they distill expectations about future corporate earnings, and because they affect decisions about spending and investment. Until October, when the break in the stock market affected attitudes, surveys had shown steady increases in consumer confidence during 1987. Thereafter, consumer sentiment dipped sharply, and although it has largely recovered, consumer spending behavior appears to have become more cautious.

The stock market is a barometer of confidence in the outlook, and it is a major component of the Nation's wealth. At the end of September the market value of corporate equities totaled roughly $4.4 trillion, about $2.3 trillion of which was held directly by the household sector. This $2.3 trillion represented nearly one-sixth of that sector's total net worth of $15 trillion, so a large change in the value of stocks could be expected to have an impact on household spending. Some econometric models have estimated that a $1 decline in the value of the stock market reduces consumer spending by about 4 cents over a horizon of roughly 1 year. Thus a $500 billion drop in stocks would mean about a $20 billion (or 0.8 percent) reduction in consumer expenditures by the fall of 1988.

The repercussions for consumption should be mitigated, however, by the fact that the lost wealth this time had been so recently acquired. While many individuals and institutions were badly hurt financially by the plunge in prices, the decline reversed only about 1 year's gain in stock values. Even after October 19, the Dow Jones remained more than double its mid-1982 level. Nonetheless, in the atmosphere of uncertainty that followed the crash, there were convincing reasons to postpone decisions to spend and invest.

The stock market crash was not, as one observer put it, "a necessary, marvelous correction," but it may have had its silver lining. In particular, as discussed below, it helped move macroeconomic policy in the direction of a more balanced posture, by adding impetus to efforts to reduce Federal spending and the deficit. In addition, by drawing an explicit parallel to the Great Depression, the stock market decline highlighted the serious dangers associated with protectionism, thereby undercutting support for protectionist trade legislation and encouraging the reduction of trade barriers. Moreover, the crash may have made enactment less likely for ill-considered Federal legislation that would inappropriately restrict the market for corporate control.

If the plunge in stock prices also causes consumers to become slightly more cautious in their spending patterns, a gentle rise in the personal saving rate and consequent added improvement in the trade balance will ensue. In this case, however, it is not true that if a little consumer retrenchment is good, a lot is better. And it is the responsibility of policymakers to watch closely and to take additional actions if it appears that a downward spiral is threatening. With appropriate policies, 1987—the market break notwithstanding—need not herald the end of the longest peacetime expansion in U.S. history.

THE POLICY RESPONSE

In the days and weeks following October 19, U.S. macroeconomic policies were reassessed. The Federal Reserve reacted promptly, indicating by word and deed that ample liquidity would be provided to help the financial system and the economy weather the stresses associated with the market break. The fiscal policy response required more negotiation and more time, but 1 month after the plunge in stock prices, the Administration and the Congress concluded an agreement to continue efforts in the direction of restraint by cutting the fiscal 1988 and 1989 budget deficits by $30 billion and $46 billion, respectively, from a specified baseline.

Fiscal Policy

Deficit reduction through Federal spending restraint was, and is, a high priority of the Administration. The stock market drop added urgency to Administration and congressional efforts to forge a 1988 budget that consolidated and built upon the deficit reduction progress made in fiscal 1987. At the "budget summit" set up in the wake of the stock market drop, participants agreed to a 2-year $76 billion deficit reduction package; the resulting legislation rendered GRH automatic spending cuts unnecessary for fiscal 1988. The spending cuts and revenue increases enacted preserve the progress on the deficit made in fiscal 1987 and set the stage for further gains.

While deficit reduction is a very important objective, it is not paramount. For example, GRH wisely allows for suspending the targets should the economy weaken markedly. In current circumstances, with the deflationary impact of the stock market decline not yet clear, progress on the fiscal deficit should continue to be made, but cautiously. The Federal Government's budget has the attractive property of providing the economy with automatic stabilizers, moving in the direction of deficit when the economy sinks and in the direction of surplus when it soars. These stabilizers should not be overridden in the pursuit of deficit reduction. Nor should the deficit reduction imperative run roughshod over considerations of economic efficiency by raising taxes that undo the benefits of tax reform and reduce incentives to work, produce, and invest.

Without question, in the long run the potential for growth in this country will be enhanced by moving toward a balanced Federal budget. Over the medium term, a tighter fiscal policy would play a major role in improving the balance between income and spending in the United States. As the government significantly reduces its demands on resources, there is an increased likelihood that the external imbalance can be righted without impairing the growth of private sector investment expenditures. If, instead, investment expenditures were to be stunted by a combination of loose fiscal policy and tight money, America's potential for future growth might be jeopardized by an increasingly outdated capital stock.

Monetary Policy

The stock market crash required—and received—an immediate monetary policy response. By the end of the day on October 19, billions of dollars of financial wealth had been lost, and fears of a possible collapse of the financial system and, ultimately, of the economy were palpable. The Federal Reserve responded promptly and unequivocally to these threats by issuing a brief statement the next day that emphasized its willingness to support the system with adequate liquidity. This statement was buttressed by open market operations that satisfied increased demands for liquidity and eased money market conditions. In the 2 weeks immediately following the crash, borrowing from the Federal Reserve declined to a level not seen since the initial tightening of policy in the spring, excess reserves soared to nearly double their usual amount, and the Federal funds rate dropped back to the 6¾ percent range that prevailed during the summer.

The stock market plunge changed the circumstances faced by monetary policymakers in an important way. The market break caused an abrupt loss of wealth and consumer confidence, removing some of the impetus for higher growth and higher prices. The balance of risks shifted as the possibility of recession increased, and the general level of uncertainty about the outlook was heightened enormously. In these circumstances, it was appropriate for the Federal Reserve to respond by making reserves freely available.

After its initial response, however, monetary policy began to take a more cautious tack. Amid signs that the economy had strong momentum going into the fourth quarter, and with few clear indications of economic retrenchment in reaction to the crash, the Federal Reserve took no further moves to ease policy, keeping the discount rate at 6 percent. Most monetary and reserve aggregates weakened over the balance of the year. M1, M1A, and total reserves each ended the year below their pre-crash levels, and M2 remained well below its target growth range, rising at just a 4 percent rate for the year as a whole.

Immediately following the 508-point drop in the Dow, the Federal Reserve's operations were exemplary. It was in the right place at the right time, supporting the financial system with ample liquidity. While it was appropriate for the conduct of policy to change subsequently (once constant reassurances to the markets were no longer needed), the stance of monetary policy at the end of 1987 may have underestimated the risks to adequate economic growth. At the end of the year, interest rates were down from their October highs, but they remained above the levels of January through August, while monetary aggregate growth remained weak. More recently, declining interest rates and increased money growth suggest that the Federal Reserve has been more supportive of economic growth.

THE ECONOMIC OUTLOOK

The Administration's economic forecast anticipates that the rate of economic expansion will slow this year from the rapid pace set in 1987. Subsequently, growth is projected to resume at a rate that more fully reflects the economy's long-term potential and that promises further reductions in unemployment. Improvement in the U.S. real trade balance is expected to contribute to output and employment growth in coming years, as it did in 1987; this contribution will play an especially important role in 1988. Increases in the working-age population, in labor force participation rates, and in the education, skill, and experience of the work force, together with an expanding capital stock and improving technology, are projected to sustain growth of the economy's output at a rate sufficient to meet rising domestic and international demand. The inflation rate is projected to move gradually downward from the 4 percent range characteristic of the current expansion toward the long-term goal of price stability. Underlying this outlook are economic policies that are assumed to support these developments.

FORECAST FOR 1988

Real GNP is forecast to rise 2.4 percent from the fourth quarter of 1987 to the fourth quarter of 1988, somewhat slower than the 3.8 percent increase in 1987. Nevertheless, output growth in 1988 is expected to generate employment growth sufficient to match increases in the labor force and to keep the unemployment rate at about its current level. As a result, the average unemployment rate during 1988 is likely to be the lowest in 13 years.

The expected slowing of real GNP growth in 1988, also widely anticipated by private forecasters, reflects economic developments during 1987, especially those during the last quarter of the year. The low rate of personal saving and the slow growth of real disposable income through the third quarter of last year already suggested some prospective slowing of growth in consumer spending—even before the stock market crash lowered household wealth and consumer confidence. Interest rates declined significantly after the market break, but they remained above their levels at the beginning of the year. Slow growth of monetary aggregates throughout 1987 points to some possible weakening of economic growth in 1988. The buildup of inventories at the end of 1987 also indicates a likely need to reduce production growth relative to final sales growth in the new year. Weighing on the other side, gains in disposable income at the end of 1987 and tax rate reductions taking effect in January 1988 are likely to support consumer spending. Declines in mortgage interest rates promise a future boost for residential construction. Perhaps most important, prospects for continued strong growth of U.S. exports look excellent. All told, however, real GNP growth in 1988 appears likely to lag behind the rapid pace of 1987.

Probably the most immediate concern is the fast pace of inventory accumulation during the fourth quarter of 1987. In particular, nonfarm inventories appeared to rise at an unsustainable rate. To correct this situation, production will have to decrease relative to final sales. Final sales are expected to show renewed growth in 1988, after being essentially flat in the final quarter of 1987. Consequently, an outright decline in production can be avoided. The inventory adjustment can be achieved through slower production growth relative to final sales growth. This essentially reverses the situation in 1987. As discussed earlier, inventory building accounted for one-half of overall economic growth last year, more than offsetting deceleration in other domestic components of GNP. In 1988 inventories are expected to accumulate at a slower and more sustainable pace. This slowdown will have a negative impact on real GNP growth, possibly with much of the effect felt in the first half of the year. Modest gains for most other domestic components of demand and strong gains for the U.S. trade sector are expected to keep real GNP growing.

Real net exports will be one of the main sources of growth in the economy in 1988, providing nearly half of overall output growth. Rapid productivity gains in manufacturing, moderate wage increases, and the effects of past exchange-rate adjustments will continue to help U.S. businesses expand exports in foreign markets and compete against imports at home. In addition, anticipated slow growth of final demand within the U.S. economy and the possible effect of the inventory correction on imports are expected to restrain growth of imports and to contribute to net export gains.

In 1987 growth of real consumption slowed to a 0.6 percent rate from the rapid pace set earlier in the expansion, and it actually fell at a 3.8 percent annual rate in the fourth quarter. The personal saving rate finished the year 1.3 percentage points above the year-earlier rate, due entirely to the drop in consumer spending and a strong gain in disposable income during the last quarter of the year. Given the high rate of auto purchases in the third quarter of 1987, the low personal saving rate for most of the year, and the likely effects of October's stock market decline, it was widely anticipated late last year that there would be some downward adjustment in consumer spending. It appears that much of that adjustment occurred in the fourth quarter. Accordingly, as indicated in Table 1-2, real consumption spending is forecast to rise at a modest 1.9 percent rate during 1988, slightly below the projected growth rate of real disposable income, and substantially below the 4½ percent annual growth rate of real consumer spending during the first 4 years of the current expansion.

Despite slower growth of aggregate output this year, fixed investment is expected to accelerate somewhat. As reported in Table 1-2, nonresidential fixed investment is forecast to increase 4.4 percent during the current year, up from 3.7 percent last year. The improving trade picture, which is lifting capacity utilization rates in many manufacturing industries, will provide much of the motivation for increased investment. The need for additional capacity to meet demands both for exports and for import substitutes should continue to stimulate investment in equipment and nonresidential structures. Lower interest rates in 1988, partly as the result of slower economic growth and lower expected inflation, should strengthen housing demand. Residential investment, after falling in 1987, is forecast to increase 3.4 percent in 1988.

TABLE 1-2.—*Economic Outlook for 1988*

Item	1987[1]	1988 forecast
	Percent change, fourth quarter to fourth quarter	
Real gross national product	3.8	2.4
Personal consumption expenditures	.6	1.9
Nonresidential fixed investment	3.7	4.4
Residential investment	−2.9	3.4
Federal purchases of goods and services	2.9	−4.6
State and local purchases of goods and services	3.1	2.9
GNP implicit price deflator	3.3	3.9
Compensation per hour[2]	2.8	4.7
Output per hour[2]	1.4	1.5
	Fourth quarter level	
Unemployment rate (percent)[3]	5.8	5.8
Housing starts (millions of units, annual rate)	1.5	1.7

[1] Preliminary.

[2] Nonfarm business, all persons.

[3] Unemployed as percent of labor force including resident Armed Forces.

Note.—Based on seasonally adjusted data.

Sources: Department of Commerce (Bureau of the Census and Bureau of Economic Analysis), Department of Labor (Bureau of Labor Statistics), and Council of Economic Advisers.

The deficit reduction agreement concluded by the Congress and the Administration, together with earlier efforts to control Federal spending, will contribute to a decline in real Federal purchases in the current year. Increases in State and local spending are expected to offset much of this decline, leaving a small negative contribution to GNP growth from the government sector as a whole.

As discussed in Chapter 2, the United States has been notable among industrialized nations in its ability to create jobs both to meet the needs of an expanding labor force and to reduce unemployment. During the current expansion 15 million jobs have been created. Between the fourth quarter of 1986 and the fourth quarter of 1987, when real GNP rose 3.8 percent, 3 million new jobs were created, and the unemployment rate dropped from 6.8 percent to 5.8 percent. Even though slower real growth in the current year is not expected to bring further immediate reductions in the unemployment rate, it is anticipated that some 1½ million new jobs will be created as employment growth keeps pace with an expanding labor force.

Higher oil prices and higher import prices increased the 1987 inflation rate (as measured by the CPI) above the very low rate recorded in 1986. Higher import prices also are expected to contribute to consumer price inflation in 1988. However, after a year of slow growth of monetary aggregates, and in view of the expected slowing of real GNP growth, acceleration of inflation is not seen as a likely danger in 1988. On a fourth-quarter to fourth-quarter basis, the CPI is forecast to rise 4.3 percent in 1988, a small decline from the rise in 1987. The GNP deflator, which is not affected directly by import prices, is forecast to rise 3.9 percent in 1988. The increase from 1987 primarily reflects a shifting of weights attached to different component prices used to calculate the deflator. It does not signify an acceleration of inflation.

The Administration's forecast for 1988 takes account of the favorable effects of tax reform, i.e., full implementation in January 1988 of the reduced marginal tax rates mandated by the Tax Reform Act of 1986 and continued confidence in the preservation of tax reform's incentives for growth and efficiency. Embodied in the forecast is the expectation that the budget compromise agreed to by the Administration and the Congress will be followed, and that rates of demand growth in other industrial countries will be sufficient to sustain world output growth while the U.S. trade deficit is being reduced. Also critical for the forecast is the assumption that monetary authorities will provide sufficient liquidity to support real growth without fueling an acceleration of inflation.

PROJECTIONS FOR 1989–93

The Administration's medium-term projections show real GNP growth strengthening after 1988, with growth averaging 3.3 percent annually for the period 1989 through 1993. This projection is based on the assessment that recent events in financial markets and slower growth in 1988 will not materially alter the longer run growth potential of the U.S. economy. Table 1–3 presents yearly estimates for major components of the medium-term projections. These estimates are not intended to be year-to-year forecasts; rather, they are meant to reflect underlying economic trends and Administration policies.

Implicit in the Administration's medium-term projections are important economic policy assumptions similar to those underlying the forecast for 1988. First, tax increases that would dull incentives to work, invest, and produce and that would impair the efficient allocation of resources are avoided, and the benefits of tax reform are preserved. Second, continued progress is made in reducing the Federal deficit, primarily by restraining the growth of Federal spending while allowing Federal revenues to rise with the growth of the economy. Third, government regulation continues to be directed toward legitimate interests of public policy and does not again become an excessive and unnecessary burden to enterprise and growth. Fourth, monetary authorities supply adequate liquidity to sustain economic expansion while fostering progress toward the long-run goal of price level stability. Fifth, protectionist pressures, which could provoke retaliation and hamper U.S. access to foreign markets, continue to be

TABLE 1-3.—*Administration Economic Assumptions, 1988-93*

[Calendar years]

Item	1988	1989	1990	1991	1992	1993
	Percent change, year to year					
Real GNP	2.9	3.1	3.5	3.4	3.3	3.2
Real compensation per hour[1]	.0	.8	1.5	1.9	2.0	1.9
Output per hour[1]	1.4	1.8	2.0	2.0	2.0	2.0
Consumer price index[2]	4.3	4.1	3.6	3.2	2.7	2.2
	Annual level					
Employment (millions)[3]	116.1	118.1	120.0	121.9	123.8	125.5
Unemployment rate (percent)[4]	5.8	5.6	5.4	5.3	5.2	5.2

[1] Nonfarm business, all persons.
[2] For urban wage earners and clerical workers.
[3] Includes resident Armed Forces.
[4] Unemployed as percent of labor force including resident Armed Forces.

Source: Council of Economic Advisers.

resisted successfully. This last assumption is especially important in view of the contribution that an improving U.S. trade balance is projected to make to overall U.S. economic growth in the medium term. It is crucial that American businesses be permitted to compete in markets that are as free as possible from the distorting effects of trade barriers.

The Full Employment and Balanced Growth Act of 1978 requires that the *Economic Report of the President*, together with the *Annual Report of the Council of Economic Advisers*, include an investment policy report and a review of progress in achieving goals specified in the act. Business fixed investment grew 3.7 percent in 1987, and it is expected to continue expanding over the next 6 years in response to a growing economy. Strong growth of manufacturing output and increases in capacity utilization in manufacturing industries provided an important stimulus to investment growth in 1987. This development was related to strong growth of U.S. exports, which is expected to persist in 1988 and later years and thus support future investment growth.

More generally, it is the view of the Administration that the best way to promote investment is to maintain a stable, growing, and flexible economy that can profitably employ an ever-larger stock of physical and human capital. The Administration has sought by means of tax reform, deregulation, privatization, and other policies to provide such an environment. Chapter 5 of this *Report* discusses in greater detail the proper governmental role in promoting economic efficiency and investment, particularly investment in human capital and in research and development.

The Administration's estimates of important measures that address goals specified in the Full Employment and Balanced Growth Act are summarized in Table 1-3. Projected increases in output and employment, higher real income and productivity growth, and lower inflation and unemployment will move the economy along the path to the targets set by the act. As was discussed earlier, 15 million jobs have been created during this expansion in an environment of decelerating inflation, and more can be accomplished in coming years. Chapter 2 documents in more detail the progress made so far in attaining the goals specified in the act and outlines the prospects for future gains.

DETERMINANTS OF GROWTH 1988-93

The long-run improvement in the Nation's standard of living implied by the Administration's economic projections hinges on the continued expansion of the economy's capacity to produce. Important determinants of this capacity are the supply of labor, its level of utilization, and its productive ability. The supply of labor is influenced by the size of the population and its demographic characteristics, by incentives to undertake employment in the market economy, and by the cyclical state of the economy. The level of utilization of the labor force, of course, responds primarily to fluctuations in the level of economic activity. The productivity of labor depends on the education, experience, and skills of the labor force, on the supplies of physical capital and other cooperating factors of production, on the technological efficiency of production processes, and on the economic efficiency of resource allocation. Except for the level of utilization of labor, the behavior of the determinants of the economy's productive capacity is governed mainly by long-term developments in the economy, and is influenced by government policies that affect these longer term developments. Favorable longer term trends and policies directed at improving growth are projected to maintain the momentum that the economy has developed during the 1980s, returning it to the trend rate of growth of the postwar era.

The sources of growth in the economy's productive potential that underlie the Administration's medium-term projections are organized into an accounting framework in Table 1-4. In order to focus on trends in the economy and to avoid the complications of cyclical fluctuations, the first two columns of the table show growth rates from business cycle peak to business cycle peak for historical periods. The third column displays growth from the peak of the last business cycle through 1987, and the final column presents growth rates over the projection period, which extends through 1993.

TABLE 1-4.—*Accounting for Growth in Real GNP, 1948–93*

[Average annual percent change]

Item	1948 IV to 1981 III	1973 IV to 1981 III	1981 III to 1987 IV[1]	1987 IV[1] to 1993 IV
GROWTH IN:				
1) Civilian noninstitutional population aged 16 and over	1.5	1.8	1.2	0.9
2) PLUS: Civilian labor force participation rate	.2	.5	.5	.5
3) EQUALS: Civilian labor force	1.8	2.4	1.7	1.4
4) PLUS: Civilian employment rate	−.1	−.4	.3	.1
5) EQUALS: Civilian employment	1.7	2.0	2.0	1.5
6) PLUS: Nonfarm business employment as share of civilian employment	.1	.1	.1	.2
7) EQUALS: Nonfarm business employment	1.7	2.1	2.0	1.7
8) PLUS: Average weekly hours (nonfarm business)	−.4	−.6	.0	−.1
9) EQUALS: Hours of all persons (nonfarm business)	1.4	1.5	2.0	1.6
10) PLUS: Output per hour (productivity, nonfarm business)	1.9	.6	1.4	1.9
11) EQUALS: Nonfarm business output	3.3	2.0	3.4	3.5
12) LESS: Nonfarm business output as share of real GNP	.0	−.1	.6	.3
13) EQUALS: Real GNP	3.3	2.2	2.8	3.2

[1] Data for 1987 are preliminary.

Note.—Based on seasonally adjusted data. Detail may not add to totals due to rounding.

Sources: Department of Commerce (Bureau of the Census and Bureau of Economic Analysis), Department of Labor (Bureau of Labor Statistics), and Council of Economic Advisers.

Growth of the labor force is expected to be somewhat slower during the projection period than earlier in the postwar era. As Table 1–4 shows, labor force growth is determined by growth in the adult population and by increases in labor force participation (the fraction of the adult population in the labor force). The gradual decline in the growth rate of the adult population that has occurred since the baby-boom generation reached adulthood in the 1960s and 1970s is expected to continue into the next decade. Also, strongly rising rates of labor force participation that have existed since the 1970s are expected to continue in coming years. Increases in overall participation likely will reflect continued entry of women into the work force, higher participation by youth as they make up a smaller proportion of the population, and a slowing of the decline in participation by people over 55. Significantly lower marginal tax rates on labor income are expected to encourage labor force participation in the years ahead. Furthermore, maintenance of a stable, growing economy with expanding employment opportunities encourages increased labor force participation. Overall, the civilian labor force is projected to rise 1.4 percent per year during the projection period.

Civilian employment is projected to grow slightly faster than the labor force from 1988 to 1993, reflecting further modest declines in the rate of unemployment. The 0.1 percent annual increase in the employment rate documented in the last column of the table reflects the estimated decline in the unemployment rate from current levels to 5.2 percent by 1993. (Chapter 2 discusses the prospects for reductions in unemployment in coming years.)

The estimate of civilian employment growth is adjusted to cover the nonfarm business sector in order to match published statistics for productivity. A further adjustment to account for a slight projected decline in the length of the workweek yields the growth rate of total hours available for production indicated in Table 1-4. The sum of the growth rate of total hours and the growth rate of output per hour (productivity for nonfarm business) determines the growth rate of nonfarm business output over the medium term. After adjustments are made for the effect of relatively stronger growth in the nonfarm business sector than in other sectors in the economy, the rate of growth of real GNP is arrived at on the final line of Table 1-4.

The table shows that the average growth rate of the economy through 1993 is projected to be almost the same as the average rate of the postwar era, despite slower growth of the adult population. Growth of nonfarm business output averages 3.5 percent annually for the projection period, slightly higher than the 3.3 percent average for the 1948-87 period. Slower population growth is projected to be offset by continued strong increases in labor force participation and a higher rate of productivity growth.

Critical to these projections is the assumption of a continued pickup in productivity growth from the low rates experienced during the 1970s and early 1980s. This assumption recognizes a number of favorable trends in the economy that are lifting productivity growth, as well as policy initiatives that should promote technological change and growth in physical and human capital. Aging of the baby-boom generation implies a trend toward a more experienced, more educated, and more skilled work force that should translate into improved productivity growth in coming years. Furthermore, labor productivity growth should rise as the result of increasing the ratio of the stock of physical capital to labor. Slower growth of the labor force will facilitate this process of "capital deepening" in coming years. Continued stability and gradual decline of the inflation rate also should contribute to stronger productivity growth by removing a major cause of distortions in the allocation of capital. Oil and energy prices are expected to remain lower than in the late 1970s and early 1980s, implying that firms will have more resources to spend on investments that enhance general productivity rather than having to focus so heavily on investments that reduce energy costs.

Government policies also should contribute to increased productivity growth. Partly as a result of government initiatives, research and development expenditures as a share of GNP are expected to remain higher than in the 1970s, thus promoting innovation and technological change. Government initiatives to improve education and to promote investment in knowledge and human capital also should lift productivity growth. Tax reform has lessened the distortions to investment decisions by establishing more equal effective tax rates across investment activities. This effect, coupled with policy initiatives to lower market barriers and distortions, will allow capital and labor to realize more fully their productive potential.

CONCLUSION

The current economic expansion entered its sixth year in 1987 and became the longest peacetime expansion in U.S. economic history. Real GNP recorded a strong 3.8 percent gain last year, 3 million new jobs were created, and the unemployment rate dropped by nearly a full percentage point. Early in the year, inflation rose temporarily into the 5 percent range, due primarily to rising energy prices. For the year as a whole, however, inflation remained in the 4 percent range characteristic of the current expansion. An important transition was made from an expansion led by growth of domestic demand and with a deteriorating trade position, to one in which improving real net exports made an important positive contribution to growth. The manufacturing sector in particular benefited from the improving trade situation, recording substantial gains in employment and output. Dramatic progress was made in reducing the Federal deficit, with a cut of one-third achieved in fiscal 1987.

However, some of the developments in 1987, particularly in the last quarter, suggest a slower pace of economic advance in 1988. Interest rates rose persistently through the first three quarters of 1987, due primarily to the vigor of the expansion, to increased worries about higher inflation and a lower dollar, and to a tightening of monetary policy after 2 years of relative ease. After the stock market drop on October 19, interest rates declined significantly, but still closed the year above the levels at which they had started it. The decline in stock prices cut the market value of equities back essentially to the level at the end of 1986. This loss of wealth, together with the effect of the stock market break on consumer confidence, was widely anticipated to dampen the growth of consumer spending somewhat. In the fourth quarter of 1987 output continued to grow strongly, but it ran well ahead of final demand, leading to a buildup of inventories. Correction of this situation implies a period in which output grows more slowly than final demand. During 1988 strong growth of exports, some recovery of consumer spending, and anticipated growth of fixed investment should enable this inventory correction to be achieved in the context of continued economic expansion.

In sum, the longevity of the current expansion and the robust growth exhibited in its most recent year testify convincingly to the dynamism and resilience of the U.S. economy. Inevitably, no economic expansion proceeds at an absolutely even pace. The economy had a good year in 1987—better than in 1986, and certainly much better than in past years of recession or high inflation. This year does not promise to be quite as good as 1987. However, the mistakes of the past are not being repeated. Inflationary pressures are not being built up that will once again distort the economy and impair its growth, ultimately bringing on the wrenching readjustments of disinflation before a stable foundation for economic progress can be reestablished. Further progress toward the long-term goal of price level stability is in prospect. The Federal deficit has been reduced substantially, and agreement has been reached on further reductions that do not undermine the benefits of low and stable marginal tax rates. The real trade deficit has begun to decline, and its further narrowing promises to be an important source of strength for the U.S. economy. The present economic expansion, and the substantial benefits it brings, can continue through 1988 and beyond.

CHAPTER 2

Rising Employment, Productivity, and Income

"MAXIMUM EMPLOYMENT, PRODUCTION, and purchasing power" are the fundamental goals of economic policy established by the Employment Act of 1946. These goals are among the most important criteria by which the success of the Administration's economic policies must be assessed. The overall record of the last 7 years is good. Since the longest peacetime expansion began in November 1982, 15 million new jobs have been created; production, as measured by real gross national product (GNP), has increased by almost 23 percent; living standards, as measured by real GNP per capita, have grown at an average annual rate of 3.2 percent; and inflation is down from double digits to a 4 percent annual rate.

Despite these accomplishments questions have been raised about the breadth of U.S. economic growth, the strength of the industrial base, and the rate at which incomes and productivity are rising. And as the unemployment rate recently approached its lowest levels in 15 years, people have wondered if further reductions in unemployment will accelerate inflation, as has happened in the past.

Many of these concerns are based on misconceptions about recent trends in employment, productivity, and income growth. These trends indicate that (1) most major demographic groups have shared in the employment and income gains realized during the current expansion; (2) employment growth has been strong particularly in high-paying occupations; (3) the U.S. industrial base remains strong and has not lost ground to other sectors of the economy; (4) incomes and productivity have rebounded after a period of slow growth in the 1970s; and (5) as U.S. economic growth continues, further reductions in the unemployment rate can be sustained without the damaging effects of accelerated wage and price inflation.

These features of the current expansion have not only ensured increased employment, production, and income; they also have improved the prospects for future growth. By virtue of its longevity and steadiness, the recent economic expansion has simultaneously improved both living standards, through increased employment and incomes, and competitiveness, through improved productivity. These gains in competitiveness can be expected to generate further gains in employment and incomes in the future.

EMPLOYMENT AND OUTPUT

Strong employment growth is one of the outstanding features of the current expansion. Since the expansion began in November 1982, total employment has increased by 15 million, and the unemployment rate has fallen by 4.9 percentage points to 5.7 percent. By December 1987 the proportion of the working-age population employed reached a record 62.3 percent, and the unemployment rate stood at its lowest level since July 1979, and within 0.2 percentage point of its lowest level since 1974.

These employment gains exceeded the average rate of growth experienced in other postwar expansions, and they far surpassed the growth rates of other major industrial countries. Employment has risen at a 2.7 percent annual rate as compared to a 2.5 percent rate in past expansions. The U.S. economy has added three times as many workers as the six other economic summit countries combined, as measured from either 1973 or 1982. This accomplishment is remarkable, considering that the combined working-age populations of these countries are more than one and one-half times the working-age population of the United States. This difference in growth reflects not only the rapidly growing U.S. labor force, but also the more than tripling of unemployment rates in France, Germany, and the United Kingdom since the mid-1970s.

These strong gains in U.S. employment have been associated with a brisk rate of growth in real output. The real value of goods and services produced in the U.S. economy has increased at an annual rate of 4.2 percent since the expansion began, a pace that is comparable to the average rate of growth in other U.S. postwar expansions, but exceeds the rate of growth experienced by many other major industrial countries. Only two other postwar expansions, the first beginning in 1949 and including the Korean war, and the second beginning in 1961 and including the Vietnam war, have had faster real output growth over a 5-year period.

The recent strength of GNP growth in the United States as compared to other industrial countries marks a break from past trends. Between 1960 and 1980 real GNP growth in the United States lagged behind output growth in the other six economic summit countries, except the United Kingdom. In contrast, since 1982 only output growth in Canada has exceeded growth in the United States.

Increases in employment and reductions in unemployment during the current expansion have affected all major demographic groups and virtually all areas of the country. During the current expansion unemployment rates for men and women have fallen by 5.4 and 4.3 percentage points, respectively, recording their largest declines of any expansion in the postwar era. This progress reflects both the depth of the 1981-82 recession, and the durability of the current expansion. Moreover, during this expansion, the unemployment rate for women has fallen to nearly the same level as the unemployment rate for men, in contrast to earlier periods when the rates for women were significantly higher than those for men.

Gains in employment and reductions in unemployment rates have been particularly large for minority groups. Employment of black workers has risen by 2.4 million since November 1982, with black female employment rising by 1.3 million and black male employment rising by 1.1 million. As shown in Table 2-1, these employment gains are significantly larger than those for other workers. As employment has risen, unemployment rates for black males and black females have fallen by 9.9 and 6.1 percentage points, respectively. Both the gains in employment and reductions in unemployment rates are substantially larger than those recorded during the 1975-80 expansion.

TABLE 2-1.—*Changes in Employment and Unemployment by Selected Demographic Groups, 1975-87*

Demographic group[1]	Employment			Unemployment rate		
	1975 to 1980	1980 to 1982	1982 to 1987	1975 to 1980	1980 to 1982	1982 to 1987
	Average annual percent change			Percentage point change		
ALL CIVILIAN WORKERS	3.3	−0.3	2.7	−2.3	4.5	−5.0
Females	4.8	.9	3.3	−2.7	3.3	−4.3
Males	2.3	−1.2	2.3	−2.1	5.3	−5.4
Both sexes 16-19	2.6	−7.3	1.0	−3.4	7.6	−8.0
Black	3.8	−.8	4.7	−2.1	7.2	−8.0
Females	4.9	.1	5.1	−2.3	5.6	−6.1
Males	2.9	−1.7	4.4	−1.8	8.7	−9.9
Both sexes 16-19	2.3	−9.3	8.2	−2.9	11.2	−16.1
Hispanic	9.3	1.2	6.8	−3.4	6.5	−7.1

[1] Persons 16 years of age and over, except as noted.

Note.—Changes are measured from business cycle trough in March 1975 to business cycle peak in January 1980, from peak in January 1980 to trough in November 1982, and from trough in November 1982 to December 1987.

Source: Department of Labor, Bureau of Labor Statistics.

Civilian employment of Hispanic workers has risen 2.3 million since the expansion began. In percentage terms the employment of Hispanics has risen much faster than the rest of the work force, although more slowly than the rapid pace set during the late 1970s.

The rapid pace of Hispanic employment growth during the 1970s was partially due to rapid growth in the Hispanic labor force, which between 1973 and 1980 grew by 8.6 percent per year. Since 1982 the rate of Hispanic labor force growth has fallen by about one-third, and this slowdown accounts for the difference in employment growth during these two expansions. In recent years the pace of Hispanic employment growth has exceeded the rate of growth in their labor force, thus allowing their unemployment rate to fall by 7.1 percentage points.

Youth employment has risen relatively slowly during the current expansion, reflecting slower growth of the population between 16 and 19 years of age than during the 1970s. Yet employment gains for black youths have been among the strongest of all demographic groups. During 1987 alone employment of black teenagers increased by nearly the same amount as it did during the entire 1975–80 expansion. At the same time unemployment rates, especially for black youths, have declined dramatically. For all youths the unemployment rate declined by 8.0 percentage points between November 1982 and December 1987 to reach its lowest level in 8 years. For black youths the unemployment rate declined by 16.1 percentage points to reach its lowest level in 13 years. Unemployment among black youths is, however, still unacceptably high.

Gains in employment and reductions in unemployment rates also have been widespread geographically. Between November 1982 and November 1987, total employment increased in all but three States. It increased by more than 5 percent in 43 States, and by more than 10 percent in 38 States. During this period unemployment rates decreased in all but 2 States, declining by at least 2 percentage points in 39 States, and by at least 4 percentage points in 27 States. Most States with small employment gains and small unemployment rate reductions were energy producers that were affected adversely by the decline in energy prices, especially during 1986.

The large and widespread gains in employment and reductions in unemployment rates during the past 5 years are primary benefits of a long and vigorous economic expansion. These gains demonstrate the principle that economic growth benefits all groups who participate in the economic system. And conversely, as shown in Table 2–1, virtually all groups are injured during periods without economic growth, as occurred between 1980 and 1982.

CHANGES IN JOB QUALITY

Employment gains during the current expansion have been largest in higher paying occupations. Nearly two-thirds of the new employment growth has been in managerial, professional, technical, sales, or precision production occupations. Within these broadly defined occupational categories, employment growth has been strong for a wide variety of jobs. It has been less vigorous in lower paying, low-skilled occupations and in part-time work.

For full-time workers, data recently available on employment and earnings in nearly 500 occupations show that about 50 percent of the increase in full-time employment between 1983 and 1986 occurred in occupations with real median earnings of at least $20,000 per year. The median earnings of these occupations were at least 10 percent above the median earnings of all full-time workers. Managerial and administrative jobs, which tend to pay the highest wages and salaries and employ the most educated workers, accounted for 21 percent of the gains in employment, even though these occupations accounted for only 11 percent of all existing jobs in 1983.

In contrast, in low-paying occupations such as food preparation and services, janitorial services, and retail sales, where new job growth is commonly thought to be strong, the share of new employment growth was almost the same as the share of existing jobs. Employment growth was smallest, relative to its share of all jobs, for machine operators and other semiskilled blue-collar occupations.

Moreover, studies have indicated that the share of total full-time employment accounted for by the lowest paying occupations declined during the 1970s and has continued to fall during the current expansion, while the share accounted for by mid- and high-paying occupations has increased. Thus the growth in employment during the current expansion has not occurred solely in higher or lower paying occupations with fewer employed in the occupations in between.

The shift in employment toward higher paying occupations among full-time workers does not mask a shift from full-time to part-time employment. More than 90 percent of the increase in employment during the current expansion has been in full-time work. This share exceeds the share of full-time employment in the civilian workforce. For those employees who work part time, the vast majority, nearly 80 percent, work part time voluntarily, according to surveys conducted by the Bureau of Labor Statistics (BLS). The fraction of part-time workers who report that they would prefer to work full time rose in the late 1970s. After increasing substantially during the 1980 and 1981–82 recessions, it has fallen steadily during the current expansion.

SHIFTS IN SECTORAL OUTPUT AND EMPLOYMENT

During the current expansion real manufacturing output has increased more rapidly than real GNP, offsetting the effects of the recession and pushing the share of manufacturing output in real GNP very close to its peak for the postwar period. The share of final goods (as distinct from services and structures) has also risen and approached its highest level since 1960. In fact, except for business cycle movements, the shares of real manufacturing output and real final goods output have been remarkably stable for 25 years. In contrast, there has been a long and relatively steady decline in the fraction of all workers who are employed in manufacturing or in goods-producing industries, and a consistent upward trend of the fraction employed in service-producing industries. More rapid gains in productivity in manufacturing and in goods-producing industries than in the rest of the economy have allowed declining shares of workers in these sectors to produce roughly constant shares of real GNP.

Shifts in Final Product

The value of the economy's total final product, as measured by real GNP, is divided officially into three broad categories: goods, services, and structures. The value of these products includes the contribution of intermediate goods and services from many different industries. For example, the price of an automobile includes the value of the transportation provided by the railroad industry, the value of the electricity provided by the utility industry, and the value of the salesperson's time provided by the retail industry. These particular services are not included as final services, since their value is already embodied in the output of the goods sector.

Final goods and structures account for more than one-half of total output. These products' share of real GNP has fallen slowly during the postwar era, while the share of final services has risen gradually. However, since 1960 final goods' share of GNP has remained roughly unchanged. In 1987 final goods represented 43 percent of GNP, the same share as in 1965 and only 0.7 percentage point below its level in 1960. During the last two decades the slight gains in final services have coincided with a declining share of output in structures. The relative stability of the shares of final goods, services, and structures in total GNP demonstrates that the United States is not becoming primarily a service economy.

While final goods' share of GNP has remained stable over the last two decades, there have been dramatic changes in the types of final goods produced and consumed. Since 1948 production of durable goods has risen substantially relative to nondurable goods. Even within these product categories, there have been changes in the goods demanded by consumers. In durables, consumption of books and kitchen appliances has fallen relative to motor vehicles and electronic equipment. Similarly, in nondurables, consumption of basic food stuffs has fallen relative to processed foods. These changes in the distribution of production across final products reflect the responses of the economy to changes in consumer demand.

Shifts in Value Added

GNP also can be partitioned based on the contributions that particular industries or sectors make to the value of the final product. Value added (or GNP originating) in an industry is the difference between the value of its output and the value of inputs purchased from other industries. For example, the measure of value added in the motor vehicle industry removes the contribution of the railroad, public utility, and retail industries from the total value of an automobile. The remaining portion, the value added, represents the industry's contribution to GNP.

Therefore the value added of the goods-producing sector (which includes agriculture, mining, construction, and manufacturing) is not equal to the final value of goods and structures. In 1986 real value added by the goods-producing sectors accounted for 32 percent of GNP, whereas the share accounted for by final goods and structures was 53 percent. The share of value added for the goods-producing industries has declined throughout the postwar period. The economy's goods-producing sector accounted for 42 percent of GNP in 1948, 40 percent in 1960, and 36 percent in 1973. The declining share in this sector has occurred entirely as a result of declining shares of value added in agriculture, mining, and construction.

The share of value added in manufacturing has remained remarkably stable throughout the postwar years, fluctuating in a narrow range between 19 and 23 percent. The manufacturing sector's share of value added has risen since the last business cycle peak in 1981. In 1986 manufacturing accounted for 22 percent of GNP, about 1 percentage point above its share in 1981, and only 0.7 percentage point below its peak share in 1973.

Manufacturing's share of GNP has remained stable despite substantial changes in the types of final goods, services, and structures produced in the economy. These changes reflect the shifting demands for final goods by consumers and for intermediate goods by producers. To accommodate the shifting demand for new products, capital and labor have been reemployed in new tasks in the manufacturing sector. This sector has maintained its share of total output because it has adapted to the changing demand for final goods, and because it continues to be an important supplier of intermediate products for final services.

Shifts in Employment

Large shifts in employment of labor across industrial sectors have occurred during the postwar period. The share of employment in service-producing industries has risen steadily. In 1948 these industries (which include transportation, communications, public utilities, wholesale and retail trade, finance, insurance, and real estate, and other business and personal services) accounted for nearly 58 percent of all nonfarm payroll employees, and they contributed more than 59 percent of total GNP. Over the years the share of employment in the service-producing sector increased faster than its share of GNP. Recently the share of employed individuals working in this sector has exceeded 75 percent, while the share of total value added in this sector has topped 67 percent.

Movements in the share of employment in goods-producing industries are roughly the opposite of such movements in the share for service-producing industries. The share of goods-producing employment and manufacturing employment has declined throughout the postwar era. Currently there are 1.6 million fewer nonfarm jobs in the goods-producing sector and more than 1.9 million fewer jobs in manufacturing than in 1979. The share of total employment in manufacturing has declined from 35 percent in 1948 to 26 percent in 1973 to 19 percent in 1987. Moreover, this trend is not confined to the United States. In all the major industrial countries, shares of employment in manufacturing have been declining since at least 1960, and in all except Japan the absolute level of employment in manufacturing has been declining since 1979.

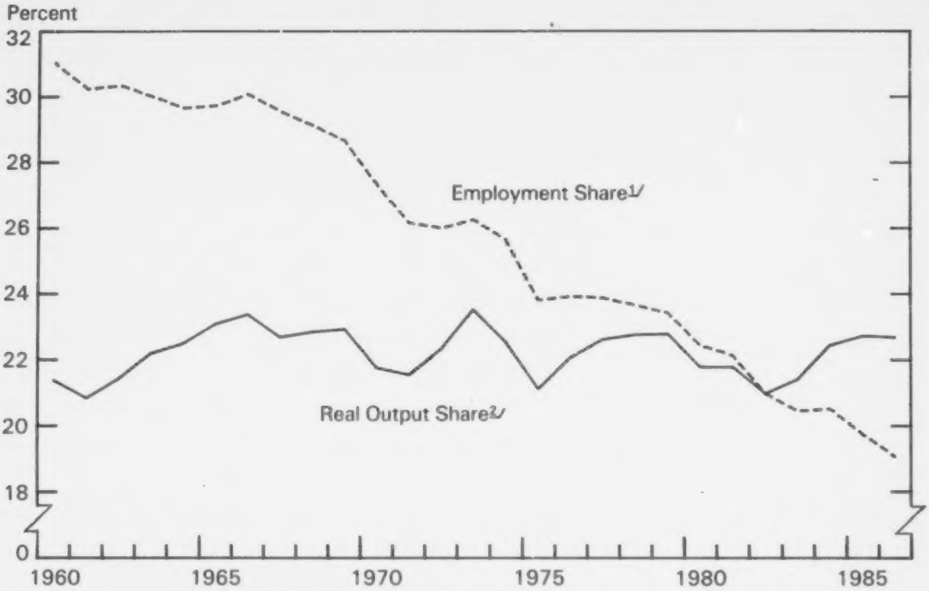
CHANGING PATTERNS OF DEMAND AND PRODUCTIVITY

While manufacturing's share of employment has declined, its share of value added has remained roughly constant. These trends are illustrated by Chart 2-1, which compares the ratio of manufacturing employment to total nonfarm employment with the ratio of value added in manufacturing to real nonagricultural gross domestic product (GDP). In 1960 about 31 percent of all nonfarm workers were employed in manufacturing and produced approximately 21 percent of total output. By 1986 a slightly larger proportion of total output was produced by 19 percent of nonfarm workers. This trend does not suggest any long-term weakness in the manufacturing sector. Instead, it reflects stronger productivity growth in manufacturing than in other sectors of the economy.

More generally, the rise in the share of employment in the service-producing sector and the corresponding decline in the manufacturing sector reflect expected responses to changing patterns of demand for goods and services as well as differential rates of productivity growth among various sectors of the economy. For most of the past 40 years the output of services has risen faster than real GNP, because households have wanted to spend a larger fraction of their rising incomes

Chart 2-1

Real Output and Employment Shares in Manufacturing



1/ Manufacturing as percent of nonfarm payroll employment.

2/ Manufacturing as percent of real gross domestic product less agriculture, forestry, and fisheries.

Sources: Department of Commerce and Department of Labor.

on services. The output of services can rise faster than GNP when productivity growth is more rapid in the service-producing sector than in the rest of the economy, or when employment expands more quickly in services than in goods. However, productivity growth in much of the service-producing sector lagged somewhat behind productivity growth in the goods-producing sector until 1973, and it has stagnated since then. The large gains in output of services have been fueled not by productivity advances but by relatively large increases in employment. Thus the increase in the share of employment in the service sector is the result of growing demand and lagging measured productivity.

Like manufacturing, the agricultural sector's share of total employment has exhibited a downward trend for some time. Productivity growth in agriculture has been quite strong, while its share of national output has been falling. As discussed in Chapter 5, it is estimated that in 1810 approximately 80 percent of the U.S. labor force was employed in agriculture. In 1910 agriculture's share was approximately 30 percent; in 1987 it had fallen to 3 percent. During this long period the share of agricultural output declined less rapidly than the share of agricultural employment, reflecting rapid increases in productivity.

Even though agricultural employment as a share of total employment and agricultural output as a share of total output have decreased, Americans today are significantly better fed and spend a smaller fraction of their incomes on agricultural products than they did during the 19th century. Because of rapid and sustained increases in agricultural productivity, the small fraction of the U.S. labor force working in agriculture is able to produce all the food required for domestic consumption, plus a substantial surplus available for export. Forestalling the downward trends in the shares of agricultural employment and output would have been counterproductive. Despite the interference of many agricultural policies, resources have moved into and out of agriculture in response to changes in consumer demand, agricultural productivity, and nonfarm opportunities.

Similarly, it would be a serious policy error to attempt to maintain the share of output or employment in manufacturing, or in any other industry. The relative constancy of the share of U.S. manufacturing output for the past 40 years is a consequence of particular circumstances. It is not an appropriate objective for economic policy. The declining share of employment in manufacturing in the United States and other industrial countries is not a sign of economic weakness. Indeed, even though it has contributed to a decline in the share of employment in manufacturing, the acceleration of productivity growth in U.S. manufacturing during the 1980s is unambiguously a source of economic strength.

INCOME AND PRODUCTIVITY

By the broadest available measure, American living standards have resumed a steady rate of increase during the 1980s, after a period of sluggish growth in the 1970s. To a large extent, these gains reflect improved productivity growth. During the 1970s, gains in real GNP per capita resulted primarily from an increasing proportion of working-age persons in the population and signified little gain for individual workers. During the 1980s, by contrast, improved productivity growth has allowed more rapid growth in compensation per worker. These gains in labor compensation are broad-based, benefiting all major demographic groups. Furthermore, the upswing in productivity growth will sustain gains in both per capita income and labor compensation in the coming years.

Another beneficial effect of improved productivity growth has been its impact on the competitiveness of the manufacturing sector. Combined with slower compensation growth, higher productivity growth in manufacturing has reduced the real cost of producing manufactured goods. The benefits of these cost savings have been realized broadly across the economy through lower consumer prices. Together with the recent depreciation of the dollar, lower real costs and lower relative prices of manufactured products have enhanced the competitiveness of U.S. manufacturers in world markets, thereby contributing to recent strong growth of exports.

These gains would have been impossible, however, had labor and management failed to take advantage of opportunities for productivity improvement, or if they had failed to meet the challenges posed by foreign competition. The many collective bargaining agreements that have called for wage freezes or concessions, and that have addressed labor's concerns about job security and management's concerns about work rules, reflect the cooperation of labor and management. As a result, the manufacturing sector has corrected many of the important problems that plagued it a decade ago, and it stands well-positioned for the future.

INCREASES IN LIVING STANDARDS

The broadest measure of the economy's ability to support the living standards of the American people is the real value of all goods and services produced in the economy each year, divided by the total population, i.e., real GNP per capita. As indicated in Table 2-2, real GNP per capita has grown at an annual rate of 1.8 percent since the last business cycle peak in 1981. This rate of growth has approached the rapid rate recorded between 1948 and 1973, has exceeded the rate experienced between the business cycle peaks in 1973 and 1981, and has equaled the average rate achieved in the United States since 1900.

TABLE 2-2.—*Growth in Real GNP per Capita and Productivity, 1948-87*

[Average annual percent change]

Period	Real GNP per capita	Contribution to real GNP per capita			Business sector productivity[1]
		Real GNP per worker	Employment-population ratio	Working-age population as share of total	
1948 IV to 1966 IV	2.2	2.6	0.1	−0.4	3.2
1966 IV to 1973 IV	2.0	.8	.2	1.0	2.0
1973 IV to 1981 III	1.1	.2	.2	.8	.7
1981 III to 1987 IV[2]	1.8	.8	.8	.2	1.5

[1] Output per hour, all persons.
[2] Preliminary.

Sources: Department of Commerce (Bureau of Economic Analysis) and Department of Labor (Bureau of Labor Statistics).

Real GNP per capita rises when a larger fraction of the population works or when those who work produce more. As indicated in Table 2–2, the importance of these two factors in generating higher living standards has differed over time. Between 1948 and 1966 real GNP per worker grew rapidly and more than offset the decline in the proportion of the population at work. The high birth rates of the 1950s increased the share of children in the population, thus causing a decline in the share of working-age persons. Between the mid-1960s and the early 1980s productivity growth declined significantly, but an increase in the fraction of the population at work partially offset these losses and helped to maintain a steady rate of growth in real GNP per capita.

Productivity growth slowed during the mid-1960s, just as the baby-boom generation began to enter the labor force. This influx of inexperienced workers slowed productivity growth but did not entirely account for the slowdown. From 1966 to 1973 growth in real GNP per worker averaged only one-third of its earlier postwar rate, and it nearly ground to a halt between 1973 and 1981. Yet living standards continued to rise during these periods, because the fraction of the population employed increased dramatically. As the baby-boom generation matured, the proportion of children in the population fell, and the potential pool of workers increased. During the middle and late 1970s nearly all gains in living standards resulted from an increase in the share of the population at work.

In contrast, living standards have risen faster since 1981 because of accelerated productivity growth. While the rate of growth of real GNP per worker remains well below that achieved during the early postwar era, these gains represent a substantial improvement over the 1970s. In addition to the encouraging gains in productivity growth, increases in the fraction of the population working continue to contribute to rising living standards. During the current decade, as women have entered the labor force in increasing numbers, the employment to population ratio has grown rapidly. This effect has been offset by slower growth in the share of the population 16 years of age and older. The decline in the birth rate since 1960 ensured that during the 1980s the share of adults in the population would grow more slowly and that increases in this share would play a lesser role in raising living standards than they did in earlier decades.

In the longer term, strong growth in living standards at rates comparable to those of the early postwar era will require continued steady growth in productivity. Increases in the fraction of the population at work are likely to slow to about 0.8 percent per year; the share of working-age persons in the population is forecast to grow at 0.1 percent, and the employment-population ratio is forecast to grow at 0.7 percent over the next 5 years (Chapter 1). Thus in the years ahead further gains in real GNP per worker will be the key to continuing rapid increases in living standards.

Gains in real GNP per worker are closely related to standard measures of productivity growth. These measures differ because labor productivity usually refers to output per hour in the business sector of the economy, rather than output per worker for the whole economy. If the second and last columns of Table 2–2 are compared, it is apparent that labor productivity growth is generally somewhat higher, but follows the same general pattern, as growth of real GNP per worker. This difference reflects both a decline in the number of hours worked per worker during the postwar period and slower measured productivity growth in the nonbusiness sector, which constitutes one-seventh of the economy. Nonetheless, the implication from these two productivity measures is that recent gains in living standards are the consequence of recent increases in labor productivity growth, and that future gains in living standards depend critically on continued labor productivity growth.

LABOR COMPENSATION AND PER CAPITA INCOME

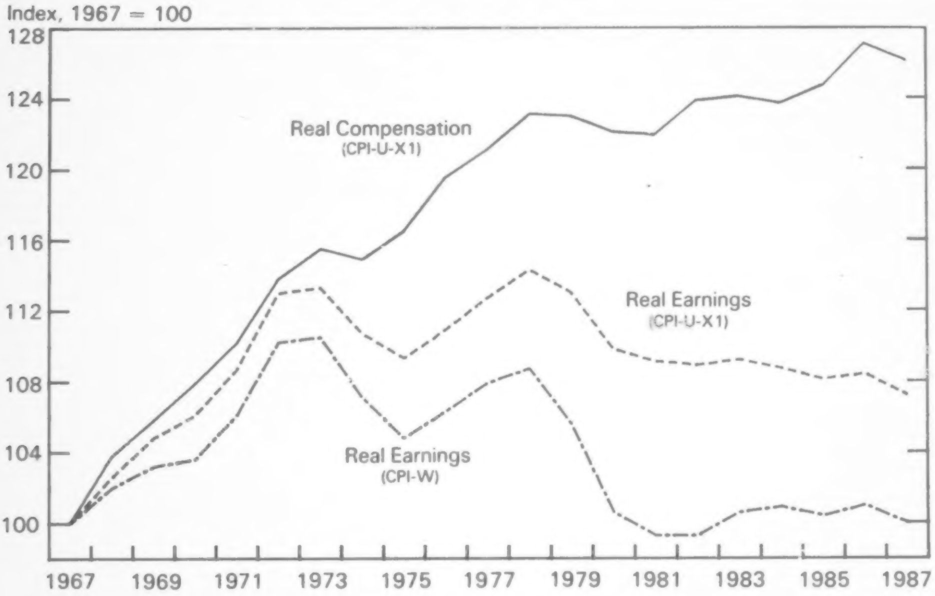
The growth of labor productivity exerts a powerful influence on the compensation earned by workers. Payments to workers, either in the form of wages and salaries or nonwage benefits, cannot consistently outstrip labor productivity growth without diminishing incentives for investment. Over time, slower investment is likely to mean slower growth in labor demand, labor productivity, and labor compensation. Conversely, strong labor productivity growth means that firms can increase their workers' pay and benefits without impairing profits.

The experience of the United States and other major industrial countries is broadly consistent with this linkage between hourly compensation and labor productivity growth. After a period of sluggish or declining growth during the 1970s, U.S. productivity and compensation growth rebounded after 1981. Recent rates of growth, however, remain below the levels attained between 1948 and 1973, when compensation and nonfarm business sector productivity grew by 2.7 percent and 2.3 percent, respectively. After 1973 the rates of productivity growth slowed considerably, and real compensation actually declined slightly. Since 1981 productivity growth has averaged 1.4 percent per year, up from 0.6 percent during the previous decade, while compensation growth has resumed its upward trend, averaging 0.7 percent per year. Similarly, in the other leading industrial countries there has been a significant slowdown in labor productivity and compensation growth since the early 1970s.

After the early 1970s measures of real labor earnings in the United States showed an even more pronounced slowdown in growth than real labor compensation. As shown in Chart 2-2, real hourly earnings (for production and nonsupervisory workers) grew rapidly during the late 1960s, reaching a peak in 1973. They then fell by 10.1 percent between 1973 and 1981, and in 1987 real hourly earnings remained 9.5 percent below their peak level. Other measures of earnings, such as real weekly earnings of usual full-time workers, are similar and were lower in 1986 than in 1973.

Chart 2-2

Real Hourly Earnings and Compensation
(Deflated by CPI-W and CPI-U-X1)



Note.—Data relate to average hourly earnings of production workers or nonsupervisory employees on nonfarm payrolls and to average hourly compensation in the nonfarm business sector (all persons). CPI-U-X1 is the consumer price index for all urban consumers incorporating a rental equivalence measure for homeownership costs. Data for 1987 are preliminary.

Sources: Department of Labor and Council of Economic Advisers.

The pattern exhibited by the real earnings data is broadly consistent with movements in labor productivity, but it significantly distorts the impression of what has been happening to the level of real payments to labor. The consumer price index (CPI), used to correct for inflation in constructing real earnings series, overstated increases in homeowner costs before 1982. This distortion caused the rate of inflation to be overstated and measures of real earnings to be too low. Furthermore, data on earnings do not include employer-provided benefits (such as most pensions and health insurance) and employer contributions to social security. The share of such employer-provided benefits and contributions is estimated to have risen from 10 percent of labor earnings in 1967 to 16 percent in 1987.

Real labor compensation growth slowed during the 1970s, but nevertheless maintained an upward trend and is substantially above its levels of the early 1970s. The second line in Chart 2-2 shows the effect of using an alternative price index to correct for inflation when calculating real earnings. The BLS devised this index, the CPI-U-X1, to correct for the biases in the CPI during the 1970s. As seen in the chart, real earnings deflated by the CPI-U-X1 do not exhibit a substantial decline after 1973. If the measure of earnings is broadened to include other nonwage and nonsalary income, real hourly labor compensation of all workers is even higher. The third line in Chart 2-2 shows that real compensation grew between 1973 and 1981, and that it is presently 9 percent higher than in 1973.

In general, the real incomes of American families also have risen since 1973, with most of these gains recorded after 1981. Real family income measures the total labor compensation and nonlabor money income of households with two or more related persons. Real income for the median family, measured in 1986 dollars, declined from $29,730 in 1973 to $26,990 in 1981, and rose to only $29,460 in 1986. As with measures of real earnings for workers, measures of real family incomes suffer from the bias in the CPI, which overestimates inflation during the 1970s. After correcting for this bias by using the CPI-U-X1, real family income still shows a $790 decline between 1973 and 1981. However, the adjusted real median family income in 1986 was the highest in U.S. history, and $1,430 higher than in 1973.

Changes in the composition of families account for part of the trend in real family income. Over time, an increasing number of people have set up households separate from their parents or children. Thus the number of separate households (made up of either families or unrelated individuals) has grown relative to the size of the population, and average family size has decreased.

Data on income per capita confirm that the trend toward lower family incomes during the 1970s was mainly due to smaller family sizes, not lower compensation. When the standard CPI is used to correct for inflation, real income per capita, measured in 1986 dollars, was unchanged at $10,220 between 1973 and 1981, and then rose $1,450 to $11,670 in 1986. When the CPI-U-X1 is used to correct for inflation, income per capita rose $680 between 1973 and 1981, and $1,360 between 1981 and 1986.

Gains in real per capita income have been widespread across major demographic groups. When the CPI-U-X1 is used to adjust for inflation, real per capita income for whites rose 7.7 percent between 1973 and 1981, and 13.1 percent between 1981 and 1986. For blacks, real per capita income rose 6.4 percent between 1973 and 1981, and 15.5 percent between 1981 and 1986. For Hispanics, real per capita income was up 14.0 percent between 1973 and 1981, and 7.6 percent between 1981 and 1986. These gains in real per capita income for major demographic groups, and the gains for the total population, are broadly consistent with movements in real GNP per capita and productivity.

DETERMINANTS OF PRODUCTIVITY GROWTH

Productivity growth, which contributes to gains in living standards and compensation, results from the combined effects of many factors. The productivity of labor is increased by human capital (such as education and work experience), by physical capital, by research and development, and by energy and other inputs that cooperate with labor in production. Studies that have sought to identify the total contribution of these factors generally have been able to account for about one-half of the productivity gains during the postwar period. In most studies a significant fraction of productivity growth remains ascribed to general "technological advance" that is not observed directly.

Nevertheless, there is some consensus concerning the factors that contributed to the slowing of productivity growth during the middle and late 1970s, and its subsequent reversal during the 1980s. These factors include a growing proportion of persons in the labor force with little work experience, a proliferation of new government regulations, a lower level of research and development (R&D) expenditures relative to GNP, and higher energy prices. The impact of these factors was reversed during the 1980s, yielding higher productivity growth, which seems likely to continue into the future.

In the coming years the increasing work experience of a maturing labor force and higher levels of educational attainment should yield significant gains in productivity. In addition, the policies and investments of the current decade should also contribute substantially to productivity growth. In the years ahead, the effects of tax reform, higher R&D spending, and the removal of burdensome regulation will improve productivity by encouraging greater efficiency in production.

SECTORAL DIFFERENCES IN PRODUCTIVITY GROWTH

The increase in productivity growth since 1981 has not occurred evenly across different sectors of the economy. Productivity in manufacturing rose at a rapid 4.2 percent annual rate between 1981 and 1987. These considerable productivity gains represent a substantial improvement over the rates of growth achieved during the rest of the postwar era. From 1973 to 1981 productivity growth in this sector slowed to a 1.3 percent annual rate, after growing by 2.8 percent per year between 1948 and 1973. By comparison, the productivity performance of the nonmanufacturing sector during the last 20 years has been poor. In this sector unofficial measures of productivity growth slowed starting in the mid-1960s, remained unchanged between 1973 and 1981, and began to creep upward once again at a 0.4 percent annual rate during the current decade. Not only are these rates of growth substantially lower than those in the manufacturing sector, but they are also considerably lower than the 2.6 percent annual rate of growth realized in the nonmanufacturing sector between 1948 and 1966.

The BLS does not report official estimates of labor productivity growth for the nonmanufacturing sector or for the major components of this sector. However, the Department of Commerce's measures of real value added, together with BLS's measures of hours paid, can be used to estimate labor productivity growth for each industry between 1948 and 1986. These measures of the growth of real value added per hour are shown in Table 2-3. The data suggest that labor productivity has failed to grow in several nonmanufacturing industries since 1981, in contrast to the strong growth that has occurred in manufacturing.

TABLE 2-3.—*Growth in Value Added per Hour Paid, 1948-86*

[Average annual percent change, except as noted]

Sector	1986 output share (percent)[1]	1948 to 1973	1973 to 1981	1981 to 1986
Goods-producing:				
Farm	2.6	4.6	5.2	6.4
Mining	4.0	4.0	−6.8	4.8
Construction	5.7	.6	−2.7	−1.1
Manufacturing	27.3	2.8	1.3	4.5
Durable manufacturing	17.4	2.4	1.1	6.0
Nondurable manufacturing	9.9	3.4	1.7	2.1
Service-producing:				
Transportation	4.3	2.3	−.2	.7
Communication	3.2	5.2	4.3	3.8
Utilities	3.5	5.9	.4	1.2
Trade	21.7	2.7	.5	3.0
Wholesale	9.5	3.1	−.1	4.0
Retail	12.2	2.4	.5	2.5
Finance, insurance, and real estate	11.0	1.4	−.4	−.3
Services	15.4	2.2	.3	−.1
Government enterprises	1.5	−.1	1.2	−.8
BUSINESS	100.0	2.9	.6	1.7

[1] Detail does not add to total because of rounding.

Sources: Department of Commerce (Bureau of Economic Analysis), Department of Labor (Bureau of Labor Statistics), and Council of Economic Advisers.

By these value-added measures of productivity growth, productivity gains in agriculture and communications have been strong throughout the postwar period. In manufacturing, mining, and wholesale and retail trade, productivity grew rapidly until the early 1970s, slowed after 1973, and has accelerated since 1981 to match or exceed its early postwar performance. In transportation and public utilities, the pattern is similar to manufacturing, but productivity growth since 1981 has not returned to early postwar levels. In construction, in finance, insurance, and real estate (FIRE), and in services (including business services and personal services such as health care), value added per hour grew steadily until the mid-1960s and very little thereafter. Since 1981 productivity in these areas actually has fallen. In construction, for example, real value added per hour peaked in 1965 and now has fallen to its 1948 level. Given the strong recovery of productivity growth in manufacturing, and the apparent gains in mining and in wholesale and retail trade, it appears that the failure of total business sector productivity to regain its early postwar growth rate can be attributed largely to the continued sagging productivity in construction, FIRE, and service industries.

Alternative measures of productivity developed by the BLS confirm these differing patterns of productivity growth across industries. The BLS's productivity measures use gross output, instead of value added, to measure product. They are available on a selective basis for 150 industries for which the BLS has been able to quantify final output with reasonable reliability. For manufacturing industries, coverage is quite broad but not complete. The available data for manufacturing industries generally show a slowdown of productivity growth between 1973 and 1981, and an acceleration after 1981. The same holds true for most specific industries in mining and in wholesale and retail trade, though coverage is less extensive than for manufacturing.

In the transportation sector, airlines, railroads, and petroleum pipelines show a dramatic resurgence of productivity growth after a significant slowdown between 1973 and 1981. Only the series for bus carriers indicates continued sluggish productivity growth after 1981. Data on telephone productivity confirm the pattern of rapid growth in value added per hour in the communications industry indicated in Table 2-3. For FIRE, the only series available is for commercial banks; it shows a significant acceleration of productivity growth after 1981. For other service industries, coverage is limited; the available series for hotels and motels, laundry and cleaning, and beauty and barber shops cover about 7 percent of total employment in this sector. These data show declining or much slower growth in productivity since 1981. For construction, there is no available measure of productivity growth based on final output.

PROBLEMS OF PRODUCTIVITY MEASUREMENT

Based on measures of both value added and gross output per hour, productivity growth appears strong in agriculture, mining, manufacturing, communications, and wholesale and retail trade. In transportation and FIRE, the data show mixed results on the strength of productivity growth. In construction and services, measured productivity has stagnated or even fallen. The recent decline in value added per hour in construction, FIRE, and services occurred despite the introduction of new communication and information processing systems and many advances in health care technology. For these sectors, not only does the pattern of growth in value added per hour diverge from that seen in manufacturing, it also appears inconsistent with observed improvements in technology.

The forces behind the apparent deterioration of productivity in construction, FIRE, and services are not well understood. Problems in measuring value added and in apportioning output across sectors may partly explain the apparent poor productivity performance in these sectors. For example, measures of real value added are derived by deflating the nominal value of outputs and inputs by appropriate price deflators. Constructing price indexes that correctly account for changes in the quality of outputs and inputs can be difficult, especially when there is no physical output, or when changes in quality are hard to measure or even observe. The limited coverage of productivity measures based on gross output in construction, FIRE, and services indicates the problems faced in these sectors. The BLS currently is expanding the coverage of these productivity measures. In the meantime, however, they recommend that productivity measures based on value added should not be used as reliable measures of productivity in construction, FIRE, and services.

The quality of productivity measures in these sectors does not necessarily affect the reliability of measures for the business sector as a whole. Business sector productivity is not a weighted average of productivity in each industry, but is the real value of final goods, services, and structures produced per hour worked. However, since value added can be hard to measure both because of problems in measuring real output and real input, the potential for mismeasurement of business sector productivity exists as long as industries with poor measures of value added also produce final products. The final sales of construction, FIRE, and services account for about one-third of the final product in the business sector. Thus distortions of these sectors' valued added increases the possibility of mismeasuring business sector productivity. If the price index used to deflate the nominal value of final services understates the impact of quality changes, real output and business sector productivity also will be understated.

The possibility that problems of measurement may be the cause of apparently slower productivity growth in the business sector should not be overstated. For one thing, some studies indicate that only about 5 percent of final product is measured poorly. For another thing, the same procedures measured significant gains in valued added per hour in construction, FIRE, and services before the mid-1960s. Thus there is nothing inherent in these measurement procedures that would cause productivity growth in these sectors to appear to worsen in recent years. The disparity between measures of value added per hour in construction, FIRE, and services before and after the mid-1960s could be explained either by workers becoming less productive, or by increasingly severe problems of measurement. Currently, however, there is insufficient evidence to support either hypothesis.

In sum, there is clear evidence of a substantial improvement in the rate of productivity growth in manufacturing and several other sectors of the economy. These gains seem likely to continue. In contrast, there is no compelling explanation for the apparent decline in productivity in construction, FIRE, and services. It may be due partly to measurement problems. However, until improved output measures are developed, it is unlikely that productivity growth in these sectors will be better understood than it is now.

COMPETITION AND ADJUSTMENT IN MANUFACTURING

The increase in productivity growth in the business sector, and the increase in living standards since 1981, are explained largely by the dramatic strengthening of productivity growth in U.S. manufacturing. However, the benefits of stronger productivity growth in manufacturing have not been realized primarily in the real wages of manufacturing workers or in the profits of manufacturing enterprises. Instead, they have resulted in lower prices for manufactured products and greater purchasing power for consumers. This result reflects the normal operation of a competitive economy, supplemented by intense international competition in manufactured products.

In a competitive economy, relatively strong productivity growth in one sector generally will not translate into relatively faster real wage growth for that sector's workers or strong profit growth for that sector's enterprises. Price competition and the mobility of labor and capital ensure that sectoral differences in wage growth and profit growth will not persist. Instead, sectoral differences in productivity growth tend to result in lower costs in sectors with faster growing productivity, and these lower costs are passed on to consumers in the form of lower product prices. Over the long run, wage growth in different sectors generally reflects average labor productivity growth in the whole economy. And since higher rates of return attract additional capital investment, profit rates in different sectors also tend over time to reflect the rate of return for the economy as a whole.

This process has been apparent in U.S. agriculture for many decades. Labor productivity in agriculture typically has increased two or three times faster than productivity in the U.S. economy as a whole. However, the earnings of agricultural workers and the profits of farm owners have not risen relative to comparable earnings and profits in the rest of the economy. Instead, consumers have been the primary beneficiaries of strong productivity growth in agriculture through declining relative prices of agricultural products.

Similarly, in U.S. manufacturing since 1981 the real hourly compensation of manufacturing workers has risen by 0.3 percent per year, while labor productivity growth has surged ahead at a 4.1 percent annual rate. Profits of manufacturing corporations generally leveled off during the 1980s but rose sharply in 1987. Relative to net sales, real after-tax profits of manufacturing corporations were still 10 percent below their 1978–79 averages through the first three quarters of 1987. The primary benefit from stronger productivity growth in U.S. manufacturing has been lower unit labor costs relative to the total private business sector. This reduction in costs has translated into substantial reductions in prices of manufactured products. Between 1981 and 1986 the relative unit labor costs for manufactured products have fallen by 13 percent, and the relative prices of manufacturing output have fallen by 10 percent.

Intense international competition enhanced productivity growth and influenced the allocation of its benefits among consumers, workers, and firms. The relative price of foreign manufactured products sold in U.S. markets fell sharply between 1980 and 1985. This decline in import prices was caused in large part by the strong appreciation of the U.S. dollar between 1980 and early 1985 (Chapter 3). Intense competition from foreign producers put pressure on U.S. manufacturers to keep their costs and prices down by limiting wage and profit growth and by enhancing productivity growth. The consumers of manufactured products thus were the primary beneficiaries of foreign competition and stronger productivity growth in U.S. manufacturing.

The adjustment of U.S manufacturing to increased international competition was facilitated by the cooperation of labor and management. In manufacturing, where more than one-third of the wage and salary workers were union members in 1979, these adjustments required a break from the customary patterns of collective bargaining agreements, in which wage increases often reflected trends in productivity growth and inflation. During the 1970s union real wage growth slowed just as productivity growth slowed, but the wages of comparable nonunion workers tended to grow even more slowly. As a consequence, the difference between the earnings of union and nonunion workers widened during the decade, implying higher relative costs for unionized firms. The combination of higher relative costs and increased foreign competition threatened the competitiveness of many U.S. industries. Manufacturing was particularly sensitive to these problems because of the relatively high levels of unionization and import competition in this sector. Continued growth of this sector required adjustments in wage demands and improvements in labor productivity.

The adjustment of U.S. workers and manufacturing firms in many cases has been especially difficult and costly. Some workers have been displaced, the real earnings of others have declined, and profits have fallen. Partially as a result of these changes, the level of unionization dropped to about 25 percent of wage and salary workers in manufacturing. Since 1984 the compensation of private nonfarm union workers has grown more slowly than for nonunion workers. As illustrated in Table 2–4, pay increases have been smaller for unionized workers in manufacturing than elsewhere in the economy. Effective nominal average wage increases in major collective bargaining settlements (agreements affecting more than 1,000 workers) in manufacturing have ranged between 1.5 percent and 5.2 percent from 1982 through 1987. Moreover, because inflation has averaged roughly 4 percent per year, many of these settlements have reduced workers' real wages.

This downward trend in real wages is due partly to the relatively large fraction of collective bargaining agreements negotiated during the 1980s that froze or cut wages. Before 1980 widespread negotiated wage freezes or outright cuts in pay were unusual, even during periods of low inflation. However, since 1981, particularly in the manufacturing sector, these agreements have become common. Even in 1987, after 5 years of economic growth, 15 percent of manufacturing workers covered by new major collective bargaining agreements accepted wage freezes or pay cuts over the life of their contracts. Moreover, the recent decline in the real compensation of union members has continued even when taking into account noncontingent lump-sum payments, which have appeared in many recent agreements.

By recognizing the challenges posed by foreign competitors, labor and management cooperated to improve the international competitiveness of U.S. manufacturing. The U.S. economy benefited substan-

TABLE 2-4.—*Measures of Changes in Compensation and Wages, 1981-87*

[Private nonfarm industries]

Sector	1981	1982	1983	1984	1985	1986	1987[1]
	Percent change[2]						
Compensation:							
All industries	9.8	6.4	5.7	4.9	3.9	3.2	3.3
Union workers	10.7	7.2	5.8	4.3	2.6	2.1	2.8
Nonunion workers	9.4	6.0	5.7	5.2	4.6	3.6	3.6
	Percent						
Average effective wage adjustment:[3]							
All industries	9.5	6.8	4.0	3.7	3.3	2.3	3.1
Manufacturing	9.4	5.2	2.7	4.3	2.8	1.5	3.4
Nonmanufacturing	9.5	7.9	4.8	3.3	3.6	2.9	2.9
	Percent of workers affected						
Settlements with no wage increase:[4]							
All industries	6	36	27	16	15	21	14
Manufacturing	10	48	44	7	18	43	15
Nonmanufacturing	3	23	18	22	13	14	14

[1] Preliminary.

[2] Percent change from December to December.

[3] Average effective wage adjustment in collective bargaining settlements covering 1,000 workers or more. Includes increases, decreases, and no changes in wages stemming from current settlements, agreements reached in a prior period, and cost-of-living adjustment clauses.

[4] Annual wage adjustments over the life of the contract for settlements covering 1,000 workers or more reached in year.

Source: Department of Labor, Bureau of Labor Statistics.

tially through increased productivity growth and improved living standards. Now that the foreign exchange value of the U.S. dollar has fallen back to the level of the early 1980s, U.S. manufacturing is exceptionally well positioned to expand sales in both domestic and foreign markets—a process that has been under way at a rapid pace for more than a year and that is likely to provide the key to continued growth for the U.S. economy in the years immediately ahead.

UNEMPLOYMENT AND INFLATION

After hovering close to 7.0 percent for nearly 2 years, the unemployment rate fell by nearly 1 percentage point during 1987 to its lowest level since 1979. This sudden drop in the unemployment rate has raised concerns that labor markets may be tightening to the point where wage inflation may begin to accelerate. In 1978, when the unemployment rate was 6.0 percent and before the second oil shock, there were already clear signs of increases in the rates of wage and price inflation. In the present situation, however, there is little evidence of an acceleration of inflation, and there are signs that further gradual reductions in the unemployment rate can be achieved without an increase in inflationary pressures.

FRICTIONAL UNEMPLOYMENT

Even at full employment, there is some "frictional unemployment" associated with job changes by current workers and entry of new workers into the labor force. Matching workers to jobs is costly and time consuming. Firms and workers seek employment relationships that best match the skills of the worker with the production requirements of the firm. Workers do not necessarily accept their first job offer, nor do employers fill vacancies with the first job applicant. Even when job opportunities are relatively abundant, workers who lose their jobs at one firm, workers who quit voluntarily to seek better jobs, and workers who enter or reenter the labor force often take some time to find suitable employment. Consequently, even when the supply of and demand for labor are evenly balanced in the aggregate, there will be some unemployment in the economy associated with job transitions.

Since demographic groups differ in their job turnover rates and in the frequency with which they leave and reenter the labor force, changes in the demographic composition of the labor force affect the level of unemployment. During the 1970s the composition of the labor force changed as increasing numbers of young persons, single persons, and married women entered the workforce. Since these groups have higher unemployment rates, the overall level of unemployment would have risen. This upward pressure on the unemployment rate was mitigated, however, by the growing fraction of workers with either higher levels of education or with white-collar and service sector jobs. These groups have lower unemployment rates relative to other labor force participants. Studies differ as to the combined effect of these changes in the labor force, but by the late 1970s they may have increased the unemployment rate by as much as a percentage point.

The growing number of two-earner families and the effects of unemployment insurance do not appear to have contributed to increases in frictional unemployment. The available evidence suggests that husbands with working wives do not remain unemployed for longer periods of time than husbands whose wives do not work. In fact the unemployment rates for married men with working wives are slightly lower than those for married men whose wives remain at home. Although studies show that unemployment compensation increases the duration of unemployment, the fraction of wages replaced by unemployment benefits has not risen significantly since the late 1960s. Moreover, the share of unemployed workers who receive unemployment benefits has fallen since the early 1970s, especially in recent years.

The factors that have caused frictional unemployment to increase since the early 1970s explain only a fraction of the total increase in unemployment rates since that time. Overall, U.S. unemployment rates have been substantially higher since 1973 than they were in the early postwar period. Between 1948 and 1973 the civilian unemployment rate averaged 4.8 percent; it averaged more than 6.0 percent in only 2 recession years, 1958 and 1961. Since 1973 the civilian unemployment rate has averaged 7.3 percent, and it has averaged less than 6.0 percent in only 2 years, 1974 and 1979. Furthermore, unemployment rates have risen for all demographic groups. Even adult married men, a group with traditionally low unemployment rates, have experienced the same proportional increase in their unemployment rates as teenagers, a group with traditionally high unemployment rates. Increases in frictional unemployment associated with shifting demographic patterns cannot explain these broad increases in unemployment rates since the early 1970s.

The deep recessions of 1974–75 and 1981–82 and the brief recession in 1980 partly explain higher average unemployment after 1973. During these years unemployment rates rose to their highest levels since the Great Depression; thus they have influenced the average level of unemployment during the last 15 years. The depth of these recessions, and limits on the feasible speed of securing reductions in the unemployment rate, especially in the face of a rapidly expanding labor force, also partly may explain the high average level of unemployment. However, there is no evidence that increases in frictional unemployment can account for unemployment rates in 1979 or 1987 that are higher than in the later years of expansions during the 1950s and 1960s. Moreover, demographic shifts that tended to increase unemployment during the 1970s more recently have been pushing down the frictional unemployment rate, reversing perhaps one-half of the earlier rise. Further downward movement in frictional unemployment from anticipated demographic shifts, especially the continuing decline in the share of younger workers, suggests that further reductions in unemployment are feasible in the coming years.

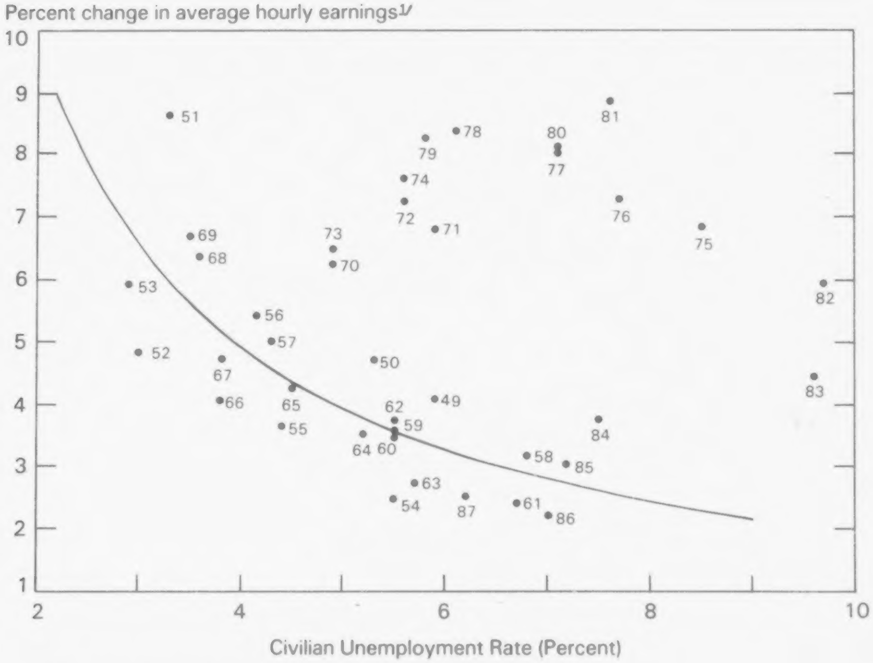
INFLATION AND UNEMPLOYMENT TRADEOFF

With the unemployment rate below 6.0 percent during the second half of 1987, some people have been concerned that further reductions in unemployment may not be possible without serious risk of accelerating inflation. The belief that further reductions in the unemployment rate may not be feasible is based on the view that there is a systematic tradeoff between lower unemployment and higher inflation, and that the unemployment rate has fallen to a level where inflation is likely to accelerate. This view states that when the unemployment rate is low and labor markets are tight, firms will face increased pressures to raise wages in order to attract and maintain a qualified and stable work force. Thus without a corresponding increase in productivity, unit labor costs also will rise, and these increased costs will be reflected in higher product prices.

The performance of the U.S. economy during the 1950s and 1960s, as illustrated in Chart 2–3, was consistent with the notion of a stable tradeoff between inflation and unemployment. Unemployment tended to be low in the years when inflation rates were high.

Chart 2-3

Wage Inflation and Unemployment



1/ For production workers or nonsupervisory employees on nonfarm payrolls.
Sources: Department of Labor and Council of Economic Advisers.

During the stagflation of the 1970s, however, this empirical relationship ceased to hold. Years of high inflation often were associated with high unemployment rates. In the absence of a stable tradeoff between inflation and unemployment, some studies postulated that the tradeoff shifted over time due to changes in inflationary expectations. Support for this view came from the observation that during each of the prior postwar expansions, wage inflation tended to rise as the unemployment rate fell. However, the observation of a shifting relationship between inflation and unemployment explains little, if most of the actual behavior of inflation and unemployment is attributed to unexplained shifts rather than to the purported relationship.

Recent data provide little evidence of a tradeoff between inflation and unemployment. In the United States the inflation rate as measured by the CPI has been running close to 4 percent per year since the end of 1981. The inflation rate fell temporarily to 1.1 percent in 1986, and then it rose temporarily to more than 5 percent in early 1987, mainly due to swings in energy prices. However, when energy prices are excluded from the CPI, inflation has been approximately 4 percent for 6 years (Chapter 1). During this 6-year period, the inflation rate has been essentially constant, while the unemployment rate has fallen almost 5 full percentage points—from 10.6 percent at its peak in November 1982 to 5.7 percent in December 1987.

Wages and earnings also have shown little evidence of accelerating as the unemployment rate has declined during the current expansion. The average unemployment rate fell from 6.9 percent in 1986 to 6.1 percent in 1987—below the level at which inflation was beginning to accelerate during the 1975–80 expansion. Unemployment rates fell in every region of the country during 1987, with especially sharp reductions in the Northeast and in the energy-producing States. Yet this substantial reduction in unemployment during 1987 was not accompanied by a sharp increase in nominal wage rates. For the year the wages of production and nonsupervisory workers increased by 2.5 percent, compared with an average annual rate of increase of 3.3 percent during the previous 4 years of the expansion.

Recent experience in other countries also appears to contradict the notion of a stable tradeoff between inflation and unemployment. In many Western European countries unemployment rates generally have been rising since the early 1970s, and they have risen throughout most of the current expansion. In contrast, rates of wage and price inflation in these countries generally have fallen since 1982, and they are now typically lower than they were in the middle and late 1970s. Based on the experience of the 1950s and 1960s, these reductions in inflation rates have been much smaller than would have been expected given the increases in unemployment rates. Comparisons of inflation rates with unemployment rates for Western European countries for the 1950s through the 1980s show no consistent relationship.

Evidence concerning a possible relationship between inflation and unemployment suggests that the U.S. economy can reduce unemployment rates further without suffering from accelerating inflation. Perhaps, as recent experience appears to show, there is no meaningful tradeoff. Over wide ranges, inflation and unemployment can move largely independently. Further reductions in unemployment that are the result of natural economic adjustments, as opposed to monetary or fiscal stimulation, can occur without increased risk of accelerating inflation. Alternatively, if there is a shifting tradeoff between inflation and unemployment, the evidence in Chart 2–3 would suggest that the U.S. economy has returned to the relationship that existed in the 1950s and 1960s. If this is the situation, then it would also appear that further reductions of unemployment can occur without a serious risk of significant increases in inflation.

PROSPECTS FOR REDUCING UNEMPLOYMENT

In assessing the potential for further reductions in the unemployment rate, and the problems in securing such reductions, it is helpful to examine the distribution of unemployment by geographic region and by duration of unemployment. Regional data point to the promise of reducing the national unemployment rate toward the low levels now prevailing in some regions, and securing this reduction in regions where unemployment remains high. Data on the duration of unemployment point to the significance of long-term unemployment associated with job displacements of more experienced workers, and to the benefits of avoiding deep recessions and massive economic disruptions that tend to generate long-term unemployment on a broad scale.

While employment gains have been widespread across regions during the current expansion, substantial regional differences in unemployment rates continued to exist in 1987. As shown in Table 2–5, the unemployment rate in New England was 3.4 percent in 1987, well below the national average of 6.2 percent, and down 4.4 percentage points from the unemployment rate in this region during the recession year of 1982. In contrast, unemployment in 1987 in the West South Central region (Louisiana, Oklahoma, Texas, and Arkansas) was 8.9 percent, well above the national average, and 1.4 percentage points above the unemployment rate in this region during 1982. This energy-producing region was sheltered somewhat from the effects of the 1981–82 recession by continued high energy prices, but it suffered significantly from the sharp decline of energy prices in 1986.

The relatively low rates of unemployment in the Middle Atlantic, South Atlantic, and especially the New England regions indicate that there is no inherent barrier that prevents the unemployment rate from falling below 5 percent. Studies have shown that the difference among regional unemployment rates is not explained by differences in the characteristics of the region's labor force and the composition of the region's industrial base. The data reported in Table 2–5 show that the regions with relatively high unemployment rates during the

TABLE 2-5.—*Regional Unemployment Rates, Selected Years, 1976–87*

[Percent[1]]

Region	1976	1979	1982	1984	1987[2]
New England	9.1	5.4	7.8	4.9	3.4
Middle Atlantic	9.6	7.0	9.4	7.6	5.0
South Atlantic	7.4	5.5	8.7	6.5	5.2
East North Central	7.3	6.1	12.5	9.4	7.2
West North Central	5.0	4.0	7.8	6.2	5.3
East South Central	6.2	6.1	12.0	9.8	8.2
West South Central	6.0	4.7	7.5	7.0	8.9
Mountain	7.2	5.0	8.8	6.2	7.3
Pacific	9.1	6.4	10.2	8.1	6.1
U.S. unemployment rate	7.7	5.8	9.7	7.5	6.2

[1] Unemployment as percent of civilian labor force.

[2] January-November average.

Source: Department of Labor (Bureau of Labor Statistics) and Council of Economic Advisers.

1975–80 expansion were not the same as those which had relatively high unemployment rates in 1987. Thus for the most part, regional characteristics do not appear to cause unemployment rates to be permanently higher in some parts of the country than in others.

Recent data indicate somewhat higher rates of wage increase in regions where unemployment rates are relatively low. The rate of wage inflation, however, remains moderate even in New England, where the unemployment rate has been at or below 4 percent since mid-1986. Since the national unemployment rate is well above New England's rate, the data on regional unemployment and wage inflation certainly do not suggest that the economy is about to suffer from a general acceleration of inflation.

Moreover, higher rates of wage increases in regions with relatively low unemployment rates can play an important role in reducing overall unemployment. Since workers tend to move to areas with higher relative wage rates and lower unemployment rates, they reduce unemployment when they leave one place, and they relieve tight labor market conditions when they arrive at another. Furthermore, higher wage rates in areas with low unemployment induce firms to shift jobs to areas with lower wage rates and higher unemployment. Through this process of shifting workers and jobs, unemployment rates in different regions tend to be equalized over time, and the aggregate unemployment rate gradually is reduced.

When unemployment rates approach frictional levels in some regions, efforts to drive down aggregate unemployment through stimulative policies may be especially inappropriate and counterproductive.

It takes time for workers to migrate to areas with rising wages and for firms to create new production capacity and new jobs in areas with high unemployment rates. These adjustments can occur naturally and gradually; they should not be forced. Resorting to stimulative macroeconomic policies could accelerate inflation without significantly affecting unemployment. Indeed, in a short time the need to combat inflation could lead to policies that would increase unemployment.

Reducing the unemployment rate further to the levels of the early 1970s requires reversing the effects of either or both of two trends: an increase in the proportion of workers who lose their jobs, and an increase in the length of time workers remain unemployed. Both of these trends have contributed to higher unemployment rates over the last 20 years. As indicated by the data in Table 2-6, an increase in the proportion of workers who lost their jobs accounts for almost all of the increase in unemployment rates between 1973 and 1987, although increases in the proportion of workers who quit their jobs or who entered the labor force were important contributors to rising unemployment rates between 1967 and 1973. Moreover, as indicated in Table 2-6, since 1973 there has been a significant increase in the portion of the unemployed who report that they have been out of work for 15 weeks or longer. Some studies have indicated that prolonged (and often repeated) spells of unemployment by experienced workers who lose their jobs are an important reason for the increase in the aggregate unemployment rate since the early 1970s.

TABLE 2-6.—*Unemployment by Reason and Duration, Selected Years, 1967-87*

[Percent]

Year	All unemployed	Reason for unemployment			Duration of unemployment		
		Job losers	Job leavers	Entrants	Less than 5 weeks	5-14 weeks	15 weeks and over
	Percent of civilian labor force				Percent distribution		
1967	3.8	1.6	0.6	1.7	54.9	30.0	15.1
1973	4.9	1.9	.8	2.2	51.0	30.1	18.9
1979	5.8	2.5	.8	2.5	48.1	31.7	20.2
1987	6.2	3.0	.8	2.4	43.7	29.6	26.7

Source: Department of Labor, Bureau of Labor Statistics.

Comprehensive data that detail the reasons for job loss and prolonged unemployment are not available. However, it reasonably may be inferred that deep and prolonged recessions and sudden massive shifts in relative prices and in the structure of output are primary causes of job loss, particularly for experienced workers. Certainly the recessions of 1974-75 and 1981-82 generated job losses on a large scale. The sudden decline of energy prices in 1986 clearly resulted in widespread job losses in energy-producing states.

Recessions are costly to the economy in terms of lost output, but more importantly to the workers who lose their jobs. These costs continue even after the recovery from a recession has begun, since a substantial amount of time is required to bring the level of unemployment down to its prerecession levels. Elimination of all fluctuations in the economy is, of course, neither feasible nor practical. Such fluctuations are an essential counterpart of economic progress. Changes in relative prices and in the structure of output are necessary if the economy is to adjust to changes in demand and technology. However, there is no need to repeat the destructive sequence of expansions, marked by progressively rising inflation rates and punctuated by deep recessions, that afflicted the U.S. economy in the 1970s and early 1980s. Moreover, as discussed in last year's *Report*, avoiding a resurgence of inflation and the subsequent need for disinflation probably would remove an important cause of large swings in relative prices and real interest rates like those that buffeted the U.S. economy during the last 20 years.

The U.S. economy today can continue economic expansion and gradual reduction of the unemployment rate without resorting to potentially inflationary policies. Reduction of the U.S. trade deficit is under way, and it is projected to continue in 1988 and beyond. Thus the tradable goods sector of the U.S. economy (predominantly manufacturing) should expand more rapidly than the rest of the economy, reversing the pattern of 1985 and 1986. These gains should aid in the further gradual reduction of unemployment.

CONCLUSION

Since 1981 the United States has enjoyed large gains in employment and production, accelerated growth of productivity and real per capita income, and substantial reductions of unemployment without a resurgence of inflation. The gains during this extended period of economic growth have been shared widely by all major demographic groups. The achievements of the last 7 years did not result from specific government programs, but rather from a general approach to policy that emphasizes reliance on the private sector. The desire for economic gain, disciplined by the forces of competition in free and open markets, provided the essential incentives for the productive efforts, the physical and human investments, the technological innovations, and the entrepreneurial advances that form the foundation of prosperity and growth. Little progress generally results from governmental efforts to control, manage, or fine tune the processes that generate growth. The proper role for government is to provide a stable economic environment in which private enterprise can flourish, to protect the rights of individuals so they can benefit from their labors, investments, and entrepreneurship, and to avoid the dulling or distortion of economic incentives through excessive taxation or burdensome regulation.

While private business has clearly been the direct source of the most important economic gains during the current expansion, government policy has played a critical role by shaping the economic environment for this success. The Administration's key priority was to enhance the stability of general economic conditions by avoiding a recurrence of the cycles of accelerating inflation, rising interest rates, and deep recessions that seriously impaired the performance of the economy during the 1970s and early 1980s. In pursuing these objectives, fiscal policy limited Federal spending, reduced marginal tax rates, and provided greater certainty about future tax policies. Monetary policy provided money growth that was sufficient to sustain economic expansion, while avoiding the resurgence of rapid inflation. And microeconomic policy promoted the efficient operation of markets and avoided intrusive regulation. The strong growth of the economy at low rates of inflation indicates that these policies have been very successful. Thus this Administration has made substantial progress toward the goals of "maximum employment, production, and purchasing power."

The Administration's economic program has become a blueprint for promoting and maintaining noninflationary growth worldwide. This approach to economic policy is especially important in today's highly interdependent world. The events of the 1970s and 1980s demonstrate that the U.S. economy is affected increasingly by events in the world economy and economic policies of other nations. The rapid growth of the U.S. economy has fostered growth in other countries as rising living standards have allowed Americans to buy more products from abroad. Likewise, rising living standards abroad will allow other nations to buy more products from the United States and enhance U.S. economic growth.

CHAPTER 3

Adjustment and Growth in a Changing World Economy

MAINTAINING NONINFLATIONARY GROWTH, while reducing external imbalances, is the primary objective of economic policy in the United States and other leading industrial nations. Market forces and economic policies have combined to reduce external imbalances, at least in volume terms, for more than a year. Further reductions are in prospect and are important to maintaining the long-run health of the world economy. Even more important, this progress should be continued in a manner that does not undermine economic growth, reignite inflation, or yield to the temptation of protectionism.

The problems associated with present external imbalances are real and require attention, but unfortunately they often are exaggerated or misunderstood. Despite a large increase in the U.S. external deficit since 1980 and problems in specific industries, overall employment growth in the United States has been very strong—the strongest of all the major industrial countries. The U.S. unemployment rate has dropped 5 percentage points since late 1982, while unemployment rates in many other industrial countries have risen and now are well above the U.S. rate. Improvement in the trade balance is expected to contribute to job growth when it is most needed—during 1988 when domestic spending is expected to grow only slowly. Nor has U.S. manufacturing performed poorly. During the past 5 years its share of total real output has been running at the postwar average, and in 1987 it stood just below its postwar peak. But despite substantial gains in employment, persistence of a large U.S. trade deficit fuels protectionist sentiment that threatens the open system of world trade and could impair future employment gains.

In the 1980s the measured rate of national saving has been low, and the United States has been a substantial net importer of foreign capital. Yet net foreign claims against the United States remain very small relative to U.S. income and wealth. Thus the general economic problems arising from the U.S. external deficit are primarily problems of the future—problems that will arise only if adequate progress is not maintained in reducing external imbalances. The immediate concern, therefore, is to continue visible progress in reducing these imbalances in order to reassure financial markets and enhance prospects for sustaining noninflationary growth in the world economy.

Current external imbalances have arisen primarily from macroeconomic causes and require primarily macroeconomic solutions. The $219 billion deterioration in U.S. real net exports of goods and services between 1980 and late 1986 was widespread across product categories and trading partners. Although some U.S. exports have suffered from barriers in some foreign markets, the growth of the U.S. trade deficit was not caused by an increase in unfair trade practices in foreign countries.

Instead, the growth of the U.S. trade deficit in the 1980s primarily reflects the influence of several interrelated macroeconomic developments. Rapid growth of spending (domestic demand) in the United States relative to both growth of spending in other countries and to growth of production (gross national product, or GNP) in the United States spurred U.S. demand for foreign imports and restrained foreign demand for U.S. exports. The need for many heavily indebted developing countries to reduce their international borrowing and improve their trade balances also cut into U.S. exports and tended to expand imports into U.S. markets. Growth of U.S. spending relative to production and income implied a deterioration in the national saving-investment balance, which, in turn, owed much to the persistence of a large Federal deficit late into the current expansion. An increasing net inflow of foreign capital offset a declining national saving rate and helped to finance reasonably robust U.S. investment. This capital inflow, which was partly motivated by high prospective after-tax returns on U.S. investment, was one among several important factors that contributed to the strong appreciation of the U.S. dollar between 1980 and early 1985. Dollar appreciation, in turn, was the critical proximate cause of much of the deterioration in the U.S. trade balance, because it made U.S. exports more expensive in foreign markets and foreign imports less expensive in U.S. markets.

Efforts to reduce external imbalances have focused on reversing their underlying macroeconomic causes and on facilitating structural adjustments essential to an altered pattern of world trade. In the United States, a continued slowing of domestic demand growth and further reductions in the Federal deficit promise continued improvements in the national saving-investment balance. In contrast, demand growth in other leading industrial countries has increased, due to government policies and market forces. In the United States relative price changes have encouraged economic adjustments directed toward higher output, increased employment, and greater investment in tradable goods industries. Relative price changes also appear to have assisted in reorienting economic activity toward stronger internally led growth in some countries with trade surpluses. A large correction in the foreign exchange value of the U.S. dollar has been especially important in improving international competitiveness of U.S. industry and, in turn, the U.S. real trade balance.

This chapter first assesses the economic significance of present external imbalances. It then discusses two of the key macroeconomic causes of present imbalances: the strong growth of domestic demand in the United States relative to other industrial countries, and the decline of the U.S. national saving-investment balance in the presence of persistently large Federal deficits. It next considers the role of exchange-rate movements and relative price changes in creating and correcting external imbalances. The chapter concludes with a discussion of the adjustment process that will sustain progress in reducing external imbalances in an environment of noninflationary growth.

THE SIGNIFICANCE OF EXTERNAL IMBALANCES

The external trade and payments position of the U.S. economy moved from surplus to substantial deficit in the early 1980s. This deterioration reflects several closely related phenomena. However, it does not signal a defect in the general performance of the U.S. economy, nor does it necessarily portend serious problems for the future. The significance of the U.S. trade and payments imbalance—the problems that it does and does not pose for the U.S. and the world economy—are best understood with reference to alternative measures of these imbalances.

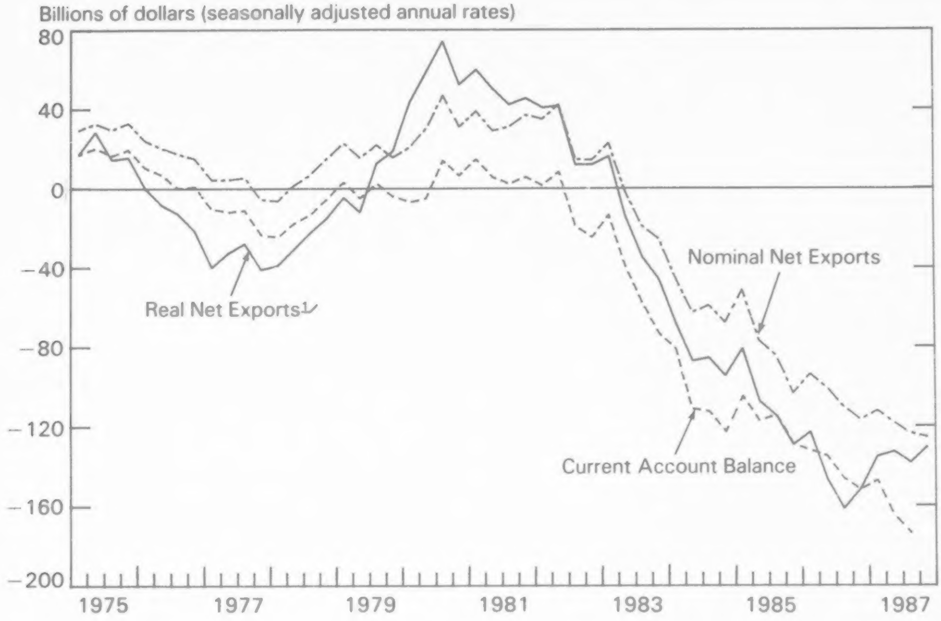
MEASURES OF THE EXTERNAL BALANCE

All measures of the U.S. external position show broadly similar movement during the past two decades and exhibit sharp deterioration since 1980–82. For example, as measured in the national income and product accounts (NIPA), the merchandise trade balance—the difference between exports and imports of goods alone—moved from a $29 billion deficit in 1980–82 to a $143 billion deficit in 1986. In 1987 the merchandise trade deficit grew further to $153 billion. These movements in the merchandise trade balance indicate that, since 1980–82, the value of U.S. imports has grown far more rapidly than U.S. exports.

Expanding the measure of the trade balance to include services (and factor income) yields the NIPA concept of "net exports." Chart 3–1 shows that nominal net exports were in surplus in 1980–82, before deteriorating through the end of 1987. Movements in nominal net exports have closely paralleled movements in the merchandise trade balance. However, since the United States runs a surplus of trade in services, the deficit in nominal net exports is somewhat smaller than the deficit in merchandise trade.

Chart 3-1

Net Exports and the Current Account Balance



[1] Billions of 1982 dollars.

Note.—Net exports for fourth quarter 1987 are preliminary; current account balance not available.

Source: Department of Commerce.

Measuring the balance between exports and imports of goods and services in constant 1982 dollars, rather than in current dollars, produces the NIPA measure of "real net exports," the measure most closely related to real GNP. As illustrated in Chart 3-1, real net exports fell more than nominal net exports between 1980-82 and late 1986; since then real net exports have improved, while nominal net exports have continued to deteriorate. The behavior of real net exports since late 1986 indicates that the external sector has made a net positive contribution to growth in real GNP and employment.

The recent divergence in the movements of real and nominal net exports primarily reflects movements in import prices. The price of imports, as measured by the import price deflator, fell between 1980-82 and late 1986, with an especially sharp drop in 1986 due to the fall in the price of imported oil. As a result, the increase in nominal spending on imports was less than the increase in the real quantity of imports. Since late 1986 import prices generally have been rising faster than the price deflator for domestically produced goods and services. Consequently, nominal spending on imports rose more than the real quantity of imports and more than the nominal value of exports. This phenomenon usually is referred to as the "J-curve" effect of currency depreciation. The initial effect of depreciation is often to raise nominal spending on imports because of higher prices and to lead to a deterioration in the nominal trade balance. However, over time the depreciation will tend to improve both real and nominal net exports.

A deficit in net exports necessarily implies that total spending by domestic residents is greater than the value of domestic production (GNP) and domestic income. When domestic demand exceeds domestic production, the excess is imported and the country runs a deficit on goods and services. Accordingly, the decline of U.S. real net exports between 1980–82 and late 1986 corresponded to a growing gap between real domestic demand and real GNP. Similarly, the decline in nominal net exports corresponded to the growing gap between nominal domestic demand and nominal GNP.

The decline in nominal net exports also was closely related to the deterioration of the national saving-investment balance. This is a direct consequence of national income accounting relationships. Aside from some relatively minor items, the excess of national saving over national investment is equal to the excess of GNP over domestic demand and, therefore, equal to nominal net exports. As will be discussed later, growth of the government deficit (which counts as a negative element in national saving) played an important role in the deterioration of the national saving-investment balance.

The difference between national saving and national investment equals the flow of net foreign investment. When U.S. residents save more than is required to finance national investment, the remainder is available to finance net accumulation of foreign assets—either direct ownership of assets located abroad or ownership of stocks, bonds, or other financial claims on foreigners. Conversely, when national investment in the United States exceeds national saving, the excess is financed through net foreign accumulation either of direct claims on U.S. assets or of financial claims on U.S. residents (including the government). Since 1980–82 foreigners have increased their net claims on U.S. assets and U.S. residents as the deficit in international trade has grown.

Finally, except for some relatively minor accounting differences, the current account balance is conceptually similar to a measure of the national saving-investment balance. Moreover, the net capital inflow—which is conceptually similar to net foreign saving—equals the current account deficit, except for a statistical discrepancy. Thus the decline of the current account balance since 1980–82, illustrated in Chart 3-1, describes the decline of national saving relative to national investment.

GROWTH OF EMPLOYMENT

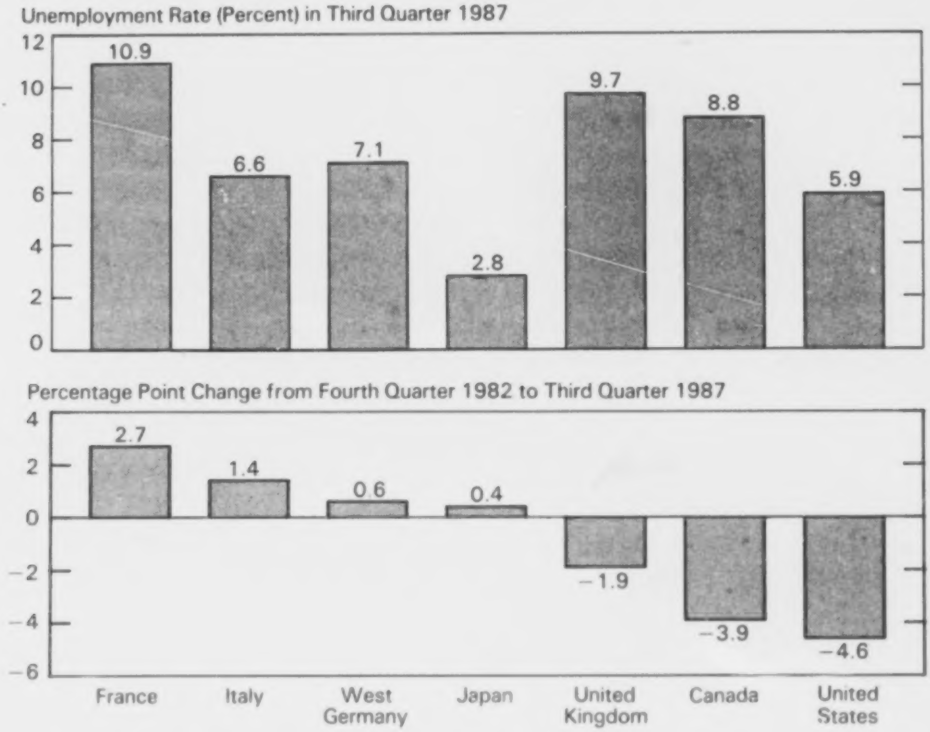
A loss of jobs to foreign competitors and a general slowing of growth of the U.S. economy often are suggested as important adverse effects of the deterioration of the U.S. trade position since the early 1980s. In fact, however, the only significant declines in U.S. employment since 1979 occurred during the recessions of 1980 and 1981-82, when the U.S. current account was in surplus. The deterioration of the U.S. external position began in earnest in late 1982, which also marks the beginning of the longest peacetime expansion in U.S. history. As discussed in Chapter 2, employment growth during this expansion has been outstanding.

International comparisons of employment growth and reductions in unemployment do not indicate that the United States has been "losing jobs" to other industrial countries. Between 1982 and 1986 the United States sustained the strongest growth of employment in percentage terms among the seven large industrial countries that participate in the annual economic summits, creating about two and one-half times as many jobs as the other six countries combined. Especially striking is a comparison with Japan and West Germany, the two countries with the largest current account surpluses among the seven summit countries. The United States created 10 million new jobs between 1982 and 1986—almost five times as many jobs as Japan, and more than 100 times as many jobs as West Germany.

The large increase in employment does not simply reflect the size of the U.S. economy or an increase in the labor force. Since 1982 the United States has enjoyed the largest reduction in the unemployment rate of all seven of the summit countries. As the top panel of Chart 3-2 shows, as of the third quarter of 1987, the United States had the lowest unemployment rate among the summit countries, except for Japan. This reverses the situation that existed in the 1950s, 1960s, and early 1970s, when unemployment rates in Western Europe typically ran at about half the U.S. rate. Furthermore, as shown in the lower panel of Chart 3-2, unemployment rates in a number of Western European countries have increased since 1982. Despite 5 years of economic expansion, these unemployment rates now stand not only well above the U.S. unemployment rate, but also near or above the peak levels recorded for these countries between 1959 and 1981.

It has been suggested that employment in the United States would have grown even more and the unemployment rate would have dropped even further, if the U.S. external imbalance had not developed since 1982. Analysis of the strength of employment growth

Chart 3-2
Unemployment Rates in the Seven Summit Countries



Note.—Unemployment rates used approximate the U.S. concept.
Source: Department of Labor.

over the course of the expansion, however, does not support this notion.

During the initial phase of the expansion, from the end of 1982 through the middle of 1984, output and employment grew very rapidly (Table 3-1). Real GNP rose at a 7.0 percent annual rate, setting a 35-year record for real GNP growth during a six-quarter period. Real domestic demand grew even more rapidly than real GNP—the fastest rate, over a six-quarter period, in nearly 35 years. In these six quarters employment rose at a very strong 3.9 percent annual rate.

The exceptionally strong growth of real domestic demand relative to the strong growth of real GNP is directly reflected in the $99 billion deterioration of real net exports between the end of 1982 and the middle of 1984. With the same rate of real domestic demand growth, if real net exports had not deteriorated, real GNP would have grown at a 9.1 percent annual rate. However, an effort to meet domestic demand growth entirely with U.S. production, even if that

TABLE 3-1.—*Economic Growth, 1982-87*

[Average annual percent change, except as noted]

Item	1982 IV to 1984 II	1984 II to 1986 III	1986 III to 1987 IV[1]
Real GNP	7.0	2.7	3.4
Real domestic demand	9.1	3.6	2.6
Civilian employment	3.9	2.1	2.5
Change in real net exports[2]	−99.0	−74.3	30.9
Change in civilian unemployment rate[3]	−3.2	−.5	−1.1

[1] Preliminary.
[2] Change over the period in billions of 1982 dollars (seasonally adjusted annual rate).
[3] Change over the period in percentage points.

Sources: Department of Commerce (Bureau of Economic Analysis) and Department of Labor (Bureau of Labor Statistics).

had been feasible, probably would have been misguided. By March 1984 the Federal Reserve already was becoming concerned that the U.S. economy might be overheating and tightened monetary policy to forestall the risk of accelerating inflation. If real GNP had grown 9.1 percent rather than 7.0 percent, possible overheating of the economy—and a resurgence of inflation—surely would have been even more of a concern in 1984. A policy reaction to forestall such a development could have cut short the expansion. Thus it is not clear that more rapid growth of real GNP during the initial phase of the expansion would have been particularly good for the economy or would have contributed to employment growth in the longer term.

During the second phase of the expansion, from the second quarter of 1984 through the third quarter of 1986, the growth rates of real domestic demand, real GNP, and employment all declined from the very rapid rates recorded initially. Some slowing probably was inevitable as the expansion matured. The sharp oil price decline in early 1986 led to increased unemployment in the energy-producing States, and probably contributed to slower overall employment growth. The further decline in U.S. real net exports during this period probably also contributed to slower employment growth, and a smaller decline in real net exports probably would have been beneficial for the economy.

In the latest phase of the expansion, since the third quarter of 1986, improving real net exports have contributed positively to real GNP and employment growth. The unemployment rate dropped rapidly during this period. While further reductions in the unemployment rate appear possible for the future (Chapter 2), the feasibility of a significantly more rapid decline during the past five quarters is open to question.

Thus strong growth of domestic demand early in the expansion contributed to a growing trade deficit, without generally damaging effects on overall employment growth. Now it is widely anticipated that improvements in real net exports will help to sustain growth of real GNP and employment during a period when growth of domestic demand is expected to be weak. The timing of movements in the trade balance may not have been exactly right to maintain the precisely optimal pace of employment growth. However, the deterioration of the trade balance did help to absorb some of the effect of very strong domestic demand growth when that could have been a serious problem for the economy. Improvement of the trade balance now promises to assist output and employment growth at a time when such assistance appears particularly useful.

STRENGTH OF MANUFACTURING

A related complaint about the trade and payments deficit is that it has crippled U.S. manufacturing and led to a massive loss of manufacturing jobs. This issue was examined extensively in Chapter 2. In the face of intense international competition, substantial and often difficult adjustments have been made in many manufacturing industries. The output of some manufacturing industries declined. However, the cause of the general decline in manufacturing output in 1981–82 clearly was the recession, not the trade imbalance. Since 1982 manufacturing output has recovered very strongly. In fact, manufacturing's share of total real output currently stands near the record level for the postwar era.

In the 1980s manufacturing's share of total employment has continued its long-term decline, and the absolute level of manufacturing employment at the end of 1987 remained below its peak level of 1979. These developments, however, reflect the generally stronger growth of productivity in manufacturing than in other sectors of the economy. Perhaps if foreign competition had been less intense, productivity growth in U.S. manufacturing would have been slower and more jobs would now exist in that sector. Americans as a whole, however, would be less well off. And unless real wage growth had been reduced to match slower productivity growth, manufacturing would not be as well positioned to expand exports in the future.

In comparison with other leading industrial countries, manufacturing has been relatively strong in the United States. Between 1979 and 1986 manufacturing output grew slightly more rapidly in the United States than in Canada and considerably more rapidly than in Western Europe. Only Japan recorded significantly stronger growth of manufacturing output, and only in Japan and Denmark did manufacturing employment increase. In Canada the decline in manufacturing employment was proportionally smaller than in the United States, reflecting Canada's slower growth of productivity. In France, Italy, and the United Kingdom, the proportional decline in manufacturing employment was significantly larger than in the United States.

If there were no U.S. trade deficit, production of manufactured goods and employment in manufacturing industries in the United States probably would be higher than they are at present; but total U.S production and total U.S. employment would not necessarily be any higher. As discussed in Chapter 2, there appears to be some room for further gradual reductions in the unemployment rate without automatically stimulating an acceleration of inflation. There is no evidence that output and employment in manufacturing and other tradable goods industries could have been increased sufficiently to replace net imports of tradable goods in 1987, without largely offsetting reductions of output and employment in other industries. Similarly, over time, as the trade deficit is corrected gradually, output and possibly employment in the manufacturing sector may expand more rapidly than in the rest of the economy. These changes, however, will reflect a shifting distribution of the economy's productive resources, not a net increase in the supply of those resources.

GROWTH OF FOREIGN DEBT

The present size of net foreign claims on the United States and their rate of increase often are cited as problems arising from continued large current account deficits. The recorded net international investment position of the United States, -$264 billion in 1986 (the latest data available), represents the difference between U.S. assets abroad ($1,068 billion) and foreign assets in the United States ($1,332 billion). The net international investment position often is referred to as the net debt of the United States, even though the value of U.S. assets abroad and foreign assets in the United States include assets such as land, buildings, and stocks, as well as interest-bearing assets such as bonds and bank accounts.

The net international investment position of the United States has deteriorated over the last few years. In 1981 the U.S. net international investment position was $171 billion (valued in 1986 dollars). The deterioration to -$264 billion in 1986 reflects the cumulative effect of a string of large external deficits as well as some valuation changes. Estimates of the flow of net foreign investment suggest that the U.S. net international investment position may have grown roughly $150 billion, to approximately $400 billion in 1987.

The net international investment position of the United States may be overstated by these estimates. According to Department of Commerce estimates, in 1986 the United States received income of $88 billion on assets owned abroad, and it paid $67 billion on foreign-owned assets in the United States. This excess of receipts over payments reflects, in part, undervaluation of some U.S.-owned assets located abroad (especially direct investments made years ago that are valued at historical cost), as well as a generally higher rate of return on U.S.-owned assets abroad than on foreign-owned assets in the United States. Therefore, in terms of income received and paid, the United States may have been a net creditor in 1986. However, in the third quarter of 1987, for the first time in recent history, payments on foreign-owned assets exceeded income on assets owned abroad. By this measure, the United States crossed the boundary between net creditor and net debtor only in the middle of 1987.

Even at $400 billion, net foreign claims on the United States are not large relative to the income generated by the U.S. economy that can be used to service them. Net foreign claims of $400 billion represent less than 10 percent of U.S. GNP. Assuming a 5 percent real rate of return, the income required to service these claims would amount to less than one-half of one percent of U.S. GNP. And based on the amount of income paid on foreign-owned assets in the United States and U.S.-owned assets abroad, the income required for net debt service in 1987 was about 0.1 percent of U.S. GNP. Consequently, concerns about the current stock of net foreign claims on the United States may be overstated.

While the current level of net foreign claims should not be cause for alarm, persistent growth of such claims at an annual rate equivalent to 3½ percent of U.S. GNP (about $150 billion in 1987) would be a source of worry. At this rate, net foreign claims on the United States would reach 40 percent of U.S. GNP by the end of the century. Servicing these claims, assuming a 5 percent real rate of return, would consume about 2 percent of U.S. GNP—still not a large percentage, but a very substantial absolute sum. Relative to the size of the economy, U.S. net indebtedness would not be much larger than Canada's has been in recent years. However, the absolute figure would be very large—more than $2 trillion in 1987 dollars. This could present difficulties for the world financial system, especially if for some reason foreigners suddenly become less willing to hold claims on the United States. Evidence of a steady reduction of the U.S. external deficit over the next few years will prevent these difficulties from emerging.

THE LEVEL OF NATIONAL SAVING

When a foreign net capital inflow is used to finance productive investment, even a relatively large and persistent inflow need not be a source of concern. The increased productive capacity financed by the capital inflow can generate the income to pay foreign creditors. Because of taxes and for other reasons, the entire return from investment is not always paid to creditors. Furthermore, a net capital inflow means that the level of productive capital stock in the importing country probably is higher than it would be otherwise. Hence, a country can gain from a net inflow of foreign capital, when this capital is used to increase productive investment. For much of its history—until about 1920—the United States was a fairly consistent net importer of foreign capital. For example, foreign borrowing helped to finance construction of U.S. railroads during the 19th century.

As indicated in Table 3-2, the recent net inflow of foreign capital has enabled the United States to maintain a ratio of gross investment to GNP that is close to the postwar average at a time when the ratio of national saving to GNP has been relatively low by postwar standards. The recent strong performance of the U.S. economy suggests that investment in the United States has paid an attractive return. Given the level of national saving, financing some investment through a net capital inflow—measured by net foreign saving—appears to have been worthwhile. The problem, to the extent that there currently is a problem, does not arise from the net capital inflow; it arises from the relatively low rate of national saving.

TABLE 3-2.—*Saving and Investment as Percent of GNP, 1949-87*

[Percent of GNP]

Item	1949-81 average	1982-86 average	1987[1]
Current dollars:			
Gross private domestic investment	16.0	15.7	16.0
Gross national saving	16.3	13.7	12.6
Net foreign saving	−.3	1.9	3.3
Net national saving[2]	8.0	2.7	2.2
Constant (1982) dollars:			
Gross private domestic investment	16.6	16.7	17.9
Gross national saving[3]	16.9	14.6	14.2
Net private domestic investment[2]	7.9	5.5	6.7
Relative price of investment (1982=100)[4]	96.3	94.1	89.0

[1] Preliminary.

[2] As percent of net national product.

[3] Gross national saving deflated by the implicit price deflator for gross private domestic investment.

[4] Ratio of gross private domestic investment and GNP implicit price deflators, multiplied by 100.

Sources: Department of Commerce (Bureau of Economic Analysis) and Council of Economic Advisers.

National saving is a matter of concern because, when properly measured, national saving measures the increase in national wealth and thus the potential for future improvements in living standards. If the national saving rate is relatively low, future living standards may not rise as quickly. The relevant measure of national saving, however, must take into account the many forms of saving that contribute to rising living standards. Such saving includes not only the usually measured accumulation of claims to physical investments and the income streams they generate, but also investments in human capital and in research and development leading to new products and technologies (discussed in Chapter 5), as well as the accumulation of consumer assets that contribute directly to production within the household. Making such adjustments, a recent study of broadly defined measures of national saving and capital formation found that the United States has not been a particularly "low-saving" country in the postwar period.

Moreover, even the narrow measures of national saving and national investment look more robust when recent declines in the relative price of capital goods are considered. Specifically, as indicated in Table 3-2, the ratio of real gross investment to real GNP recently has been somewhat higher than its average in the postwar period, thus implying that the recent net capital inflow has helped to finance a somewhat higher rate of real gross investment.

Nevertheless, the measured rate of gross national saving in recent years has been lower than the postwar average. Even allowing for problems in measuring depreciation, the standard measure of real net investment relative to real net national product (NNP) has not been particularly high in recent years. The standard measure of net national saving relative to NNP has been running at less than half its postwar average since 1981, and the net capital inflow has financed roughly half of net national investment. Broadening the measures of national saving and national investment to include human capital, research and development, and consumer durables diminishes the relative importance of the net capital inflow. However, it still appears that the national saving rate has been relatively low in recent years.

Whether the appearance of a low national saving rate actually portends slower growth of living standards is far from clear. The rate of national saving between 1973 and 1981—whether measured in nominal, real, gross, or net terms—was not particularly low by postwar standards. Yet, as discussed in Chapter 2, the rate of increase in living standards, measured by the rate of growth of real per capita GNP, was quite slow by earlier postwar standards. Since 1981 the rate of growth of real per capita GNP has increased, notwithstanding the decline in the measured rate of national saving. Judged by the outcome, therefore, the rate of national saving would appear to have risen since the middle and late 1970s, although not back to the level of the earlier postwar period.

In any event, a higher rate of national saving probably would mean more rapid improvement of living standards, and both natural economic adjustments and economic policies indicate an increase in the national saving rate. With national investment projected to remain strong but not increase substantially as a share of GNP, the anticipated increase in the national saving rate would imply a significantly smaller net inflow of foreign capital and hence a significantly slower increase in net foreign claims on the United States. The anticipated increase in national saving relative to national investment also implies a reduction in the growth rate of real domestic demand relative to that of real GNP. This is consistent with the expectation that improvements in U.S. real net exports will make important contributions to output and employment growth in coming years. Because improvements in real net exports must come to a large extent in net trade in manufactured products, these anticipated developments also suggest continuing strength of output and employment growth in the manufacturing sector.

DEMAND GROWTH AND THE SAVING-INVESTMENT BALANCE

The external deficit of the United States has been improving in real terms since late 1986. Continued progress in reducing this deficit, in an environment of noninflationary growth, is an important goal of economic policy. Assessing the likelihood of such progress, and the policies that will help to sustain it, requires clear understanding of the macroeconomic forces that are fundamentally responsible for the growth of the U.S. external deficit. Specifically, strong demand growth in the United States after the worldwide recession of 1980–82 and relatively weak demand growth in other industrial countries during the early phases of recovery spurred the growth of U.S. imports and retarded the growth of U.S. exports. Simultaneously, the growth of the Federal deficit and its persistence late into the current expansion contributed to the deterioration of the U.S. national saving-investment balance and to a corresponding increase in the net inflow of foreign capital.

THE MACROECONOMIC CHARACTER OF THE EXTERNAL DEFICIT

The U.S. external position deteriorated between 1980 and 1986, with all measures of the trade and payments balance moving into substantial deficit. In particular, U.S. real net exports (measured in 1982 dollars) moved from a surplus of $57.1 billion in 1980 to a deficit of $145.8 billion in 1986, with the deficit reaching a maximum of $161.6 billion on an annualized basis in the third quarter of 1986. As indicated in Table 3–3, all but one component of the trade balance—other goods—shared in the deterioration. The surplus in services was cut in half in real terms. Merchandise trade, which accounts for the bulk of total trade, absorbed over 80 percent of the total decline in real net exports. Most major end-use categories of the real merchandise trade balance (foods, feeds, and beverages; industrial supplies and materials; capital goods; automobiles; and consumer goods) experienced a decline. Within merchandise, manufactured products moved from a surplus in 1980 to a large deficit in 1986. Agricultural exports, which are influenced by economic forces and policies somewhat different from other merchandise exports, also suffered from shrinking markets between 1980 and 1986. Furthermore, the aggregate trade balance deteriorated against most major regions and trading partners: against the industrial countries as well as the developing countries; against Europe and East Asia as well as Africa and Latin America.

Table 3-3.—*Selected Real Net Exports, 1980-87*

[Billions of 1982 dollars]

Item	1980	1982 IV	1986 III	1987 IV[1]
		Seasonally adjusted annual rates		
Net exports of goods and services	57.1	11.7	-161.6	-130.7
Services	68.9	55.3	31.4	22.9
Factor income	55.5	47.9	31.1	18.6
Other	13.3	7.3	.3	4.3
Merchandise	-11.8	-43.6	-193.0	-153.6
Foods, feeds, and beverages	16.9	12.2	2.6	6.0
Industrial supplies and materials (including petroleum)	-61.9	-49.3	-94.7	-83.9
Capital goods (except automobiles)	55.9	31.6	.6	10.9
Automobiles	-11.6	-16.7	-48.7	-43.2
Consumer goods	-17.2	-25.0	-61.5	-57.3
Other	6.1	3.6	8.6	13.3
MEMORANDUM:				
Nonagricultural exports minus nonpetroleum imports	31.9	-17.1	-137.2	-106.0

[1] Preliminary.

Source: Department of Commerce, Bureau of Economic Analysis.

Exceptionally strong growth of imports into the United States led the deterioration in real net exports. Between the beginning of the expansion and the third quarter of 1986, real imports grew at an average annual rate of 14.6 percent, more than double the average growth rate recorded between 1948 and 1980. Real exports also grew, but their 3.3 percent annual growth rate was much less than that of imports and about half the annual growth rate of real exports between 1948 and 1980.

Between the third quarter of 1986 and the end of 1987, real net exports improved by $31 billion, narrowing the real trade deficit from 4.3 to 3.4 percent of real GNP. A $74 billion increase in real exports outstripped a $43 billion increase in real imports. The 15.4 percent annual rate of real export growth was more than double the average between 1948 and 1980. Strong gains in real merchandise exports were widespread across major product categories. At 6.4 percent, the annualized growth rate of real imports was well below the pace set between 1982 and late 1986 and about equal to the average growth rate between 1948 and 1980. Increases in real merchandise imports were generally modest (negative in the case of consumer goods and petroleum products), except for capital goods excluding autos. Strong import growth in capital goods presumably reflected increased business purchases of durable equipment and substantial inventory accumulation. Contrary to the improvement in merchandise trade, the surplus in factor income deteriorated by $13 billion—the effect of a growing stock of foreign claims on the United States. This led to a deterioration in the real trade balance in services; the surplus on services other than factor income showed the same pattern as merchandise trade.

The influence of broad macroeconomic forces, rather than specific developments in markets for particular products or trading relationships with particular countries, is readily apparent in the development of the U.S. real trade balance during the 1980s. Broad macroeconomic forces caused the strong growth of U.S. imports and the weak growth of U.S. exports across so many products and trading partners. Similarly, broad macroeconomic forces played a critical role in the recent resurgence of real export growth and in the general slowing of real import growth. These forces must continue to be major factors in the gradual process of reducing the U.S. external imbalance.

DIFFERENTIAL DEMAND GROWTH

During the 1970s both real domestic demand and real GNP in the United States generally grew more slowly than in Japan, Canada, and Western Europe. Differences between demand growth and real GNP growth, however, were relatively small in all countries, and trade imbalances remained small by recent standards. The situation changed during the 1980s, as indicated by the data in Table 3–4. During the general period of slow growth and world recession in 1980–82, U.S. real GNP fell slightly more rapidly than real domestic demand; thus as a share of real GNP, U.S. real net exports fell by 1.0 percentage point. In Canada the pattern was essentially the reverse; real domestic demand fell a little more rapidly than real GNP, and real net exports increased modestly.

During the period of world recession, real GNP growth in Japan slowed from a 5 percent average annual rate in the 1970s to 3.2 percent. Real net exports contributed about 1 percentage point to Japanese economic growth, since real GNP grew about 3 percent annually and real domestic demand grew about 2 percent per year. In West Germany, real domestic demand fell at a rapid 2.6 percent annual rate, but improving real net exports cushioned the effect on output growth, and real GNP fell at only a 1 percent annual rate. The pic-

TABLE 3-4.—*Growth in Real Domestic Demand and Real GNP in Major Industrial Countries, 1980–87*

[Average annual percent change]

Country/region	1980 I to 1982 IV		1982 IV to 1984 II		1984 II to 1986 III		1986 III to 1987 III[1]	
	Real domestic demand[2]	Real GNP[3]	Real domestic demand[2]	Real GNP[3]	Real domestic demand[2]	Real GNP[3]	Real domestic demand[2]	Real GNP[3]
United States	−0.5	−0.8	9.1	7.0	3.6	2.7	[1]2.6	[1]3.4
Japan	2.1	3.2	3.0	4.4	4.1	3.7	4.8	4.3
Germany	−2.6	−1.0	2.9	2.5	2.9	3.3	[1]3.3	[1]1.6
France	1.1	1.4	−.5	.7	3.4	2.1	2.5	2.0
United Kingdom	−.2	−.0	4.1	2.3	3.4	3.3	5.7	5.2
Italy	−.5	.1	3.2	2.8	3.4	3.0	3.0	2.4
Canada	−1.0	−.3	6.7	7.1	4.1	3.6	5.0	4.1
Europe (Big Four)[4]	−.8	.0	2.2	2.0	3.2	2.9	3.2	2.4
G-7 less United States[4]	.1	1.0	2.8	3.2	3.6	3.2	3.8	3.1

[1] Data for United States and Germany are preliminary estimates for 1987 IV.

[2] Real domestic demand is real GNP minus real net exports.

[3] Data for France, United Kingdom, Italy, and Canada are real GDP.

[4] Data for Europe (Big Four) and G-7 less United States use GNP weights. Big Four consists of Germany, France, United Kingdom, and Italy.

Sources: Department of Commerce (Bureau of Economic Analysis) and country sources.

ture was mixed in the other three large European economies (France, Italy, and the United Kingdom).

During the initial phase of the expansion, from the end of 1982 to the middle of 1984, real domestic demand in the United States shot up at a 9.1 percent annual rate, exceeding by 2.1 percentage points the rapid growth rate of U.S. real GNP. The strong growth of demand and income reflected the recovery of the economy from a particularly deep recession, aided by the shift to a quite expansionary monetary policy early in the second half of 1982, and spurred on by significant reductions in marginal tax rates on both labor and capital income. In most of the other six leading industrial countries, recovery was less robust, as indicated in Table 3–4. For these six countries, combined real GNP growth averaged 3.2 percent, slightly exceeding the 2.8 percent annual growth rate of real domestic demand. The very strong growth of real domestic demand in the United States, together with relatively weak demand growth in other industrial countries, clearly contributed to the strong growth of U.S. imports and the weak growth of U.S. exports during this period.

In the second phase of the expansion, from the middle of 1984 through the third quarter of 1986, growth of real domestic demand in the United States slowed to a 3.6 percent annual rate. As real net exports deteriorated further, U.S. real GNP grew at a moderate 2.7 percent annual rate. Growth of real domestic demand picked up in some of the other six leading industrial countries and equaled the U.S. rate during this period. Because U.S. imports already were substantially larger than U.S. exports by 1984, equal rates of demand growth in the United States and abroad implied further deterioration of the U.S. trade balance.

Moreover, growth of real domestic demand during this period may give an exaggerated impression of the strength of spending, particularly for countries whose currencies appreciated against the dollar. In early 1986, the dollar prices of oil and many primary commodities fell. These price declines made possible increased purchases of oil and other primary commodities (measured in volume terms), even though the amount spent (measured in dollars) fell. And when spending is measured in foreign currencies that appreciated against the dollar, the effect of falling dollar prices of primary commodities was amplified. This observation partly explains how real domestic demand could grow more rapidly than real GNP in Japan between the second quarter of 1984 and the third quarter of 1986, and yet Japan's current account surplus could increase from 3.1 to 4.6 percent of GNP. Some of the benefits that Japan enjoyed from the large decline in the yen prices of oil and other primary commodities ended up in increased saving rather than increased spending. Similarly, during this period West Germany recorded a large increase in its current account surplus, from 0.5 to 3.6 percent of GNP, despite only a small excess of real GNP growth over real domestic demand growth.

In the most recent phase of the expansion, starting in late 1986 and continuing through 1987, the growth rate of real domestic demand in the United States slowed to 2.6 percent per year, due primarily to slower growth of consumption spending. In the other six leading industrial countries the growth rate of real domestic demand moved up slightly. The latest available data show that between their peak in the fourth quarter of 1986 and the third quarter of 1987 the current account surpluses of Japan and West Germany (as a share of GNP) declined by 1.4 and 1.8 percentage points, respectively. The reversal of the demand growth differential contributed to an improvement in U.S. real net exports, thus allowing the growth rate of U.S. real GNP to rise to 3.4 percent despite the slower growth rate of U.S. real domestic demand.

The growth rate of U.S. real domestic demand probably had to fall below the 3.6 percent annual rate experienced during the second phase of the expansion if the decline in U.S. real net exports was to be reversed. As discussed in Chapter 1, if the U.S. unemployment rate declines further and productivity grows further, the medium-term growth rate for U.S. real GNP is probably about 3.2 percent per year. Improvement of U.S. real net exports at an average annual rate equivalent to, for example, 0.8 percent of real GNP implies an average annual growth rate of real domestic demand of about 2.4 percent, which is very close to the 2.6 percent growth rate actually realized since the turnaround in real net exports began in late 1986.

In 1988 it appears likely that real domestic demand will grow relatively slowly in the United States, for the reasons discussed in Chapter 1. In particular, consumption spending is expected to grow relatively slowly as households seek to increase their saving rates above the low average level of 1987 (but probably not much above the rate achieved in the fourth quarter). Furthermore, investment spending for inventory accumulation is expected to decline. The strong growth of both real exports and real net exports is expected to play a key role in maintaining a moderate rate of economic growth.

Rapid growth of real domestic demand in other industrial countries, particularly those with large external surpluses, is critical to reducing their external surpluses, maintaining worldwide demand growth, and improving the U.S. external balance. If U.S. real domestic demand growth declines without an offsetting increase in other countries, total demand growth in the world economy would fall. If this happens, the rate of growth of world output also would fall. Output and employment growth in all the industrial countries, including the United States and the surplus countries, probably would be curtailed. The economic problems of many developing countries, especially those with large external debts, would become more severe.

Recent developments indicate that domestic demand in other industrial countries is beginning to strengthen. In surplus countries recent growth of real domestic demand has been running well ahead of growth of real GNP, reversing the pattern of export-led growth that had prevailed for many years. Between the third quarters of 1986 and 1987, domestic demand growth exceeded real GNP growth by 1.1 percentage point in West Germany and by 0.5 percentage point in Japan. Furthermore, recent domestic demand growth in Japan has been exceptionally strong—5.2 and 7.6 percent in the second and third quarters of 1987. In these two quarters domestic demand growth in Japan exceeded GNP growth by an average of 2 percentage points. Strong growth of real domestic demand in Canada and the United Kingdom also has contributed significantly to recent demand growth in the world economy.

The Organization for Economic Cooperation and Development (OECD) estimates that real GNP in Western Europe will grow only about 1½ percent per year during the next 2 years, while real domestic demand is expected to rise by 2¼ percent per year. Some countries that enjoyed relatively vigorous demand and output growth during the past 2 years may face worsening balance of payments positions. Consequently, it is especially important for countries with substantial external surpluses to increase their demand growth in order to maintain their own output and employment growth while their external surpluses contract. More rapid demand growth in surplus countries also is essential for the health of the world economy, because domestic demand growth is expected to be relatively weak in the United States, and a shrinking U.S. trade deficit will subtract from demand growth in other countries.

Market forces have provided, and are likely to continue to provide, strong incentives for rapid growth of domestic demand in surplus countries. In particular, the real appreciation of the yen and the lower dollar price of imported oil have substantially reduced the real cost of goods imported by Japan relative to goods and services produced in Japan. The passthrough of a substantial part of this decline in real import costs has boosted the purchasing power of Japanese consumers, thereby contributing to rising living standards and to growth of domestic demand. Moreover, yen appreciation has induced consumers to shift their purchases from domestic to imported goods. The passthrough of the benefits of currency appreciation and lower oil prices apparently has been important in stimulating stronger growth of consumer spending in West Germany as well.

The government of Japan has carried out commitments made at the Louvre Accord in February 1987 and the Venice Economic Summit in June 1987 to boost domestic demand growth. On May 29, 1987, the Japanese government announced a 6 trillion yen ($41.3 billion) emergency stimulus package, including 5 trillion yen in public works and 1 trillion yen in tax cuts. At the end of last year the government of Japan approved a 1988 budget including $58.7 billion for public works—20 percent above the figure a year ago and equal to the high level established by last year's supplementary budget.

West Germany also has taken actions to boost domestic demand growth. For example, the West German government increased the amount of tax cuts for 1988 and later years to about DM14 billion ($8.7 billion), and it will provide special loans at preferential rates for private and public investment projects. In addition, the German Bundesbank moved to reduce short-term interest rates in late 1987.

Continued domestic demand growth in other industrial countries will contribute to the health of the world economy in another important way. A growth-oriented solution to the international debt crisis requires that the heavily indebted developing countries expand their exports. During the 1980s the United States increased its purchases of goods exported by these countries while other industrial countries reduced their purchases. Now, as the United States reduces its trade deficit, other industrial countries must absorb more of the exports of these heavily indebted developing countries if they are to solve their debt problems. As a result, developing countries would be better able to service their debts and would provide better markets for the exports of the industrial countries.

THE ROLE OF THE FEDERAL DEFICIT

Because a deterioration in the U.S. external position corresponds to a decline in the national saving-investment balance and to an associated increase in the net capital inflow, the deterioration of the U.S. external position also must have an explanation in terms of factors that affect the national saving-investment balance and the net capital inflow. This explanation does not contradict the earlier discussion of differential demand growth in the United States and other countries, nor does it conflict with the later discussion of exchange-rate movements. All are part of the same puzzle. The importance of different forces affecting the external balance may be more readily apparent from one perspective than another, but all the pieces fit together in the end.

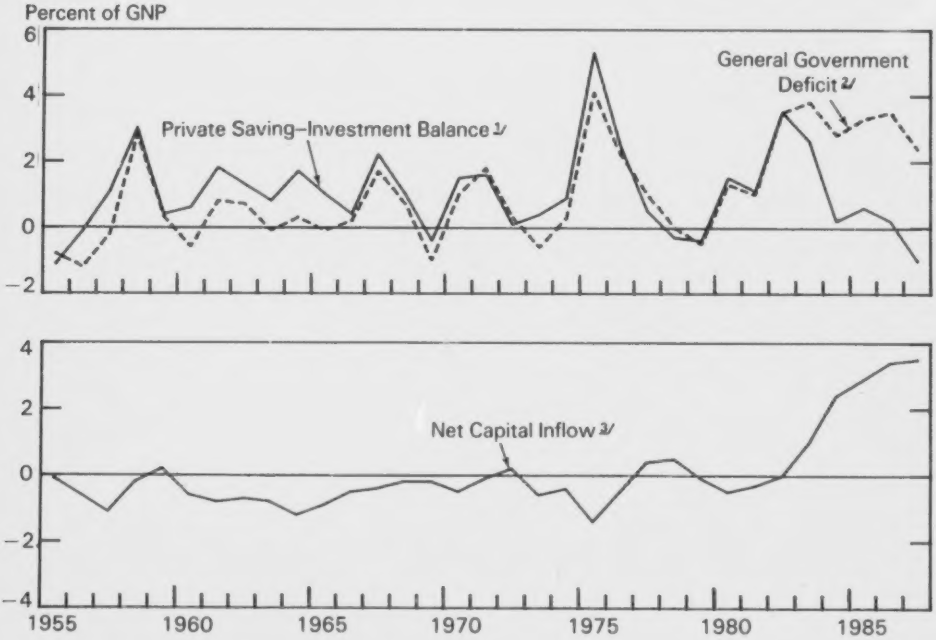
The deterioration of the national saving-investment balance and the corresponding increase in the net capital inflow since 1982 reflect primarily the decline in the national saving rate (as officially measured). The low rate of national saving since 1982 is accounted for primarily by the high rate of government dissaving which, in turn, is attributable to large Federal deficits. Measured on a NIPA basis, the government deficit (Federal, State, and local combined) has averaged 3.2 percent of GNP since 1982, compared with an average deficit of 0.3 percent of GNP between 1947 and 1982. The Federal deficit alone has increased to an average of 4.6 percent of GNP since 1982, compared with a pre-1982 average of only 0.6 percent of GNP. The personal saving rate also has been relatively low since 1982, but the rate of business saving has been relatively high. Since 1982 the private saving rate (personal plus business saving) has run about the same as its postwar average.

The causal linkages between the government deficit and national saving, national investment, and the capital inflow, however, are more complex than these averages suggest. As shown in the upper panel of Chart 3–3, movements in the general government deficit as a share of GNP have tended to parallel movements in the private saving-investment balance as a share of GNP. This parallelism has offsetting implications for movements in the net capital inflow, as measured by net foreign saving in the national income and product accounts: an increase in the private saving-investment balance implies a smaller net capital inflow, while an increase in the government deficit implies a larger net capital inflow. As shown in the lower panel of

Chart 3-3, movements in the net capital inflow generally have been smaller than movements in either the private saving-investment balance or the government deficit.

Chart 3-3

Components of the Saving-Investment Balance



1/Gross private saving minus gross private domestic investment.
2/Federal, State, and local deficit.
3/Defined as net foreign saving.
Note.—Data for 1987 are preliminary.
Source: Department of Commerce.

In the United States the dominant economic factor affecting movements in both the government deficit and the private saving-investment balance has been the business cycle. Usually during recessions, private investment has declined more than private saving, so the private saving-investment balance has improved. Also during recessions government revenues tend to fall and government expenditures tend to expand, so the government deficit grows. In contrast, during expansions private investment usually grows relative to private saving, so the private saving-investment balance deteriorates. Also, government revenue tends to rise relative to government expenditure, so the government deficit declines. Because business cycle effects on the private saving-investment balance typically have been a little stronger than business cycle effects on the government deficit, the net capital inflow has tended to decline during recessions and to increase during expansions.

In this regard, the recessions of 1980 and 1981–82 were not very different from earlier recessions. However, as is apparent in Chart 3–3, the pattern changed during the current expansion. As usual, the private saving-investment balance declined during 1983–86, reflecting the strong growth of private investment. But the government deficit did not decline during 1983–86 as it usually does during a vigorous expansion—a result more than accounted for by the persistence of quite large Federal deficits. Therefore, the net capital inflow grew much more than normal between the end of 1982 and late 1986.

In fiscal 1987, due to a large decline in the Federal deficit, the total government deficit dropped substantially from 3.6 to 2.5 percent of GNP. By itself, this reduction should have cut the net capital inflow and the current account deficit by nearly one-third from its level in fiscal 1986. However, the private saving-investment balance deteriorated substantially between fiscal 1986 and fiscal 1987, from 0.3 percent to minus 0.8 percent of GNP. This fall in the private-saving investment balance reflected both a strong gain in gross private domestic investment (due largely to higher inventory investment) and an outright decline in private saving (because of lower personal saving). Thus, despite a substantial decline in the government deficit, the net capital inflow and the current account deficit both increased modestly.

Future improvements in the private saving-investment balance and future reductions in the Federal deficit should cause the national saving-investment balance to improve and the net capital inflow to decline. Because the rate of inventory investment in the nonfarm sector at the end of 1987 is probably unsustainable for any significant length of time, downward adjustment in this component of private sector investment should contribute to an improved private saving-investment balance in 1988. The personal saving rate in 1987 was very low by postwar standards, although it rose in the fourth quarter. Assuming that the personal saving rate remains close to its fourth quarter 1987 level in 1988 (which implies growth of consumption spending about even with growth of real disposable income), the average saving rate in 1988 will be well above that of 1987—a further factor tending to improve the private saving-investment balance.

The Federal budget deficit as a share of GNP is expected to decline only modestly in 1988 after the large drop registered in 1987. However, the revised Gramm-Rudman-Hollings budget law mandates a gradual reduction in the Federal deficit in later years and a balanced budget by 1993. The budget compromise agreed to by the Administration and the Congress last autumn provides for further steps in this gradual process. Of course, the desirability of particular measures to reduce the Federal deficit must be assessed on the basis of their likely effects on the economy.

The Federal deficit has grown because Federal outlays as a share of GNP have risen substantially since the 1960s (despite a lower share for defense spending), while Federal revenues as a share of GNP have risen modestly. Specifically, Federal outlays averaged 19.0 percent of GNP in the 1960s; they were 22.8 percent in 1987. Federal revenues also rose, but by less than the increase in Federal outlays: from 18.2 percent of GNP in the 1960s to 19.4 percent in 1987. Increases in taxes, without effective restraint on spending growth, could fail to reduce the budget deficit. Moreover, increasing taxes and undoing tax reform would impair incentives to work, invest, and produce—the foundations of future growth. Thus reduction of the Federal deficit, but only through appropriate means, is the proper policy for improving the national saving-investment balance.

Finally, the behavior of the net capital inflow cannot be viewed as entirely passive. The apparent attractiveness of U.S. investment to foreigners and the inflow of capital it helped to stimulate probably contributed to the appreciation of the dollar between 1980 and early 1985, which played a major role in the deterioration of the U.S. trade balance. In the overall equilibrium of the economy, this deterioration was the necessary counterpart of both the increase in real domestic demand relative to real GNP and the growing gap between national investment and national saving. If foreigners had not supplied capital willingly, the pattern of real domestic demand, real GNP, national investment, national saving, and the government deficit all would have been different.

Nevertheless, it is fair to say that the low rate of national saving, which reflects primarily the persistence of a large Federal deficit late into the current expansion, has played a key role in the development of the U.S. external deficit. It is equally and simultaneously true that the strong growth of real domestic demand in the United States and the relatively weak growth of real domestic demand in other industrial countries between 1982 and late 1986 played critical roles in the evolution of the U.S. external deficit. Therefore, reduction of this external deficit in an environment of continued economic growth in the United States and other countries requires two important and simultaneous developments. First, the U.S. national saving-investment balance must improve through government spending restraints leading to a reduced Federal deficit. Second, the growth of real domestic demand in other industrial countries must remain sufficiently high to sustain world output growth, while growth of real domestic demand remains restrained in the United States, leading to a gradual contraction of worldwide external imbalances.

EXCHANGE RATES AND RELATIVE PRICES

Strong appreciation of the U.S. dollar between 1980 and early 1985 and its lingering effects in 1986 were important proximate causes of the deterioration of the U.S. trade balance—the ultimate causes lying with the economic forces that induced the dollar to appreciate. The full effects of dollar appreciation were not felt immediately; it took time for the relative prices of imports and exports to respond fully to exchange-rate changes, and it took more time for trade quantities to respond to changes in relative prices. As illustrated in Chart 1-1 of Chapter 1, there is about a six-quarter lag between movements in the foreign exchange value of the U.S. dollar and movements in U.S. real net exports. The recent upturn in real net exports beginning in late 1986 followed six quarters after the beginning of dollar depreciation in early 1985.

The improvement in the trade balance through the end of 1987, however, is somewhat smaller than normally would be expected from dollar depreciation through the middle of 1986, after allowing for lags. Analysis of this shortfall requires examination of the responses of relative export and import prices to dollar depreciation. This analysis is important for assessing the likelihood of recovering lost ground and of further improving real net exports commensurate with the further depreciation of the dollar since the middle of 1986.

THE EXTENT OF EXCHANGE-RATE MOVEMENTS

The value of the U.S. dollar increased substantially against the currencies of most industrial countries between 1980 and the first quarter of 1985. The extent of appreciation was somewhat uneven across currencies. The dollar rose 109 percent against the British pound and 79 percent against the West German deutsche mark, but only 14 percent against the Japanese yen and 16 percent against the Canadian dollar. According to the Federal Reserve staff's trade-weighted index of the foreign exchange value of the dollar against the currencies of 10 large industrial countries (used in subsequent discussions), the dollar rose substantially over this period. Adjusted for movements of the price level in the United States and in other industrial countries, the real foreign exchange value of the dollar rose a similar amount.

The dollar's appreciation during the early 1980s probably was spurred in part by the shift in monetary policy from perceived ease and accommodation in the late 1970s to an actual and ultimately credible anti-inflationary stance. Continued dollar appreciation after 1982 probably also reflected the strong recovery in the United States in comparison with most other industrial countries, as well as the general restoration of confidence in the U.S. economy. High real interest rates in the United States during the early 1980s, as well as changes in U.S. tax laws that increased the attractiveness of investment in the United States, may have attracted foreign capital that tended to push up the value of the dollar. The increase in U.S. interest rates and the tightening of monetary policy that began in early 1984 may have contributed to the upward surge in the value of the dollar in 1984. No single factor, however, is the exclusive cause of the dollar's appreciation; several different factors probably played important roles.

Since February 1985 the U.S. dollar generally has been depreciating. Substantial declines have been recorded against the currencies of all the large industrial countries, except Canada. Based on the Federal Reserve's index, by the end of 1987 the dollar had fallen—in real and nominal terms—about 40 percent and was slightly below its 1980–81 level. The adjustment was less, however, against the currencies of some developing countries.

As with the dollar's appreciation in the early 1980s, the exact causes of its depreciation since early 1985 are difficult to isolate. The deceleration in U.S. real GNP growth after mid-1984 probably contributed to the dollar's fall. The intentions of the G-5 countries (France, Japan, the United Kingdom, the United States, and West Germany) to seek a lower dollar, as implied by the Plaza Agreement of September 1985, and their subsequent actions to back up these intentions probably hastened the dollar's fall. The easing of U.S. monetary policy that began in late 1984 and extended through 1986 also may have contributed to the dollar's decline.

THE DOLLAR AND RELATIVE EXPORT PRICES

The rising dollar in the early 1980s increased the relative price of U.S. produced goods exported to foreign markets. The price of U.S. exports in foreign currencies relative to overall foreign price levels rose 52 percent between 1980 and the first quarter of 1985. It is not surprising, therefore, that U.S. exporters became less competitive. In 1986 U.S. real exports of goods and services had fallen 3 percent below their 1980 level, compared with about 40 percent growth that would have been expected based on the trend rate of growth between 1948 and 1980.

Dollar appreciation, not slow productivity growth or spiraling wage costs, was the primary cause of the decline in the international competitiveness of U.S. manufacturing in the first half of the 1980s. Between the cyclical peak in the third quarter of 1981 and the first quarter of 1985, labor productivity in manufacturing increased at a 4.4 percent annual rate—more than one and a half times as fast as the 1948-80 average—and only slightly below the 5.0 percent growth rate of labor compensation in manufacturing. As a result, U.S. unit labor costs rose at only a 0.6 percent rate from late 1981 to the first quarter of 1985. This was less than the growth in a trade-weighted average of unit labor costs in 11 of the largest foreign industrial countries, measured on a national currency basis, during the first half of the 1980s. However, once dollar appreciation is factored in, the International Monetary Fund (IMF) estimates that unit labor costs for U.S. manufacturing, relative to unit labor costs for manufacturing in other industrial countries, rose substantially during this period.

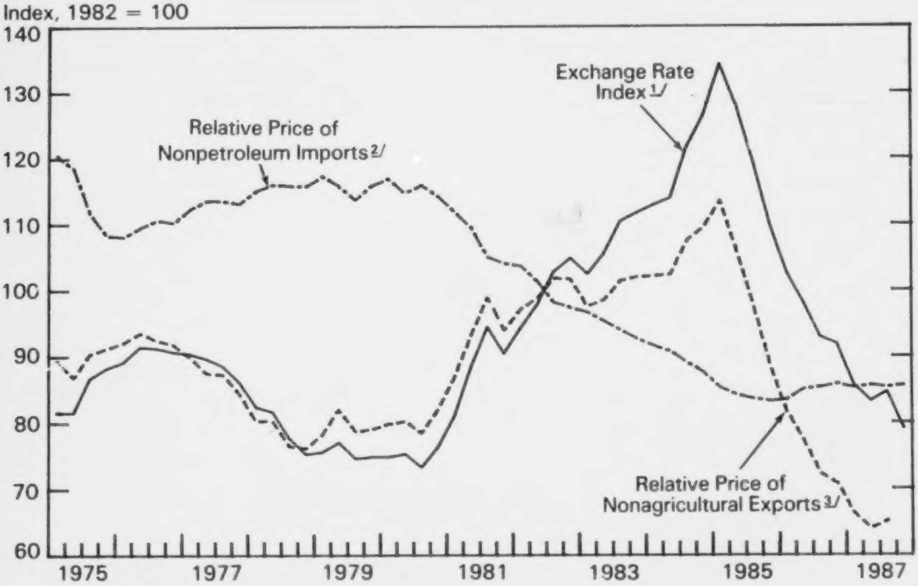
The depreciation of the U.S. dollar since early 1985 now has enabled U.S. exporters to regain the international competitiveness they lost earlier. Since the dollar began to decline, relative unit labor costs have fallen significantly. Continued strong productivity growth and wage restraint in U.S. manufacturing have contributed to improved cost competitiveness. Between the first quarter of 1985 and the fourth quarter of 1987, manufacturing productivity increased at a 3.7 percent annual rate, and hourly compensation of manufacturing workers grew at a 2.7 percent annual rate. As a result, unit labor costs for U.S. manufacturing have fallen at a 1.0 percent annual rate since the first quarter of 1985. Adding to this the effect of dollar depreciation, the IMF estimates that unit labor costs for U.S. manufacturing, relative to those in other industrial countries, fell 39 percent between the first quarter of 1985 and the second quarter of 1987 (the latest data available), and they are currently below their 1980 level.

Dollar depreciation also has contributed to a significant decline in the relative price of U.S. nonagricultural exports in foreign markets, as measured by a foreign currency price of U.S. nonagricultural exports divided by a foreign consumer price index (CPI). As Chart 3–4 illustrates, movements in the relative price of nonagricultural exports have been dominated by movements in the exchange rate. As the dollar appreciated in the early 1980s, the relative price of U.S. nonagricultural exports rose in foreign markets. As the dollar depreciated, this relative price declined, and it is now lower than it was in 1980.

As might be expected on the basis of improved price and cost competitiveness, U.S. exports recently have enjoyed very strong growth. Real nonagricultural exports have grown at a 19.5 percent annual rate since the third quarter of 1986—nearly triple their rate of growth between 1967 and 1980. Reflecting this export growth, U.S.

Chart 3-4

Relative Prices of Exports and Imports and the Exchange Rate



1/Multilateral trade-weighted value of the dollar against the currencies of the G-10 countries plus Switzerland.

2/ Ratio of the implicit price deflator for nonpetroleum imports to the U.S. consumer price index.

3/Ratio of the implicit price deflator for nonagricultural exports multiplied by the exchange rate index to a GNP-weighted consumer price index for the G-10 countries (excluding the United States) plus Switzerland.

Note.—Data for fourth quarter 1987 are preliminary.

Sources: Department of Commerce, Department of Labor, and Board of Governors of the Federal Reserve System.

manufacturing output has increased at a 5.4 percent annual rate, and manufacturing employment has increased by 380,000.

Econometric estimates suggest that nonagricultural exports rise about three-fourths of a percent for every 1 percent decline in their relative price, with about half the effect occurring within three quarters. Based on these estimates, the 43 percent decline in the relative price of nonagricultural exports between the first quarter of 1985 and the third quarter of 1987 should increase U.S. nonagricultural exports by about 30 percent within 2 years. By the end of 1987 real nonagricultural exports had risen 36 percent above their level in the first quarter of 1985. Since a part of this export gain probably was due to normal export growth associated with rising foreign incomes, it would appear that substantial further export growth should result from relative export price adjustments made through the third quarter of 1987.

Moreover, relative export prices in the third quarter of 1987 may not yet fully reflect the depreciation of the dollar since early 1987. Following the Louvre Accord in February 1987, exchange rates among the group of seven summit countries (the G-7 countries) remained fairly stable until the fourth quarter, allowing for much of the adjustment of relative export prices to exchange rates to occur by the end of the third quarter. However, the dollar continued to depreciate against the currencies of important trading partners outside the G-7 during the spring and summer, and it declined a further 6 to 7 percent against other G-7 currencies (except the Canadian dollar) in the fourth quarter. Therefore, there is reason to anticipate further reductions in relative prices of U.S. goods in foreign markets that will contribute to further increases in U.S. exports.

To correct the U.S. external deficit in a noninflationary manner, U.S. manufacturing industries must be able to expand output to serve domestic and foreign markets without incurring rapidly rising costs. Recent data on capacity utilization suggest that existing capacity in most manufacturing industries appears ample to meet output growth in the near term. The ability to expand capacity beyond existing levels is aided by the availability of unused capacity in the durable goods industries that produce business equipment, as well as by the slack that exists in the construction industry. The incentive to expand capacity is indicated by recent data that show manufacturers' profits from current production running well above their average rate in 1986. Additional incentive is provided by the knowledge that the correction of the trade imbalance should assure continued strong growth in the manufacturing sector. According to the most recent Department of Commerce survey of investment intentions, U.S. manufacturers plan to increase spending for plant and equipment in real terms by 8.6 percent in 1988.

THE DOLLAR AND RELATIVE IMPORT PRICES

The price of nonpetroleum imports relative to the U.S. consumer price index fell until the fourth quarter of 1985, at which time it was 28 percent below its 1980 level. Allowing 2 further years for this relative price decline to work its full effect on import quantities, econometric estimates suggest that a relative price decline of this magnitude would have induced about a 30 percent increase in real nonpetroleum imports. In the fourth quarter of 1985, nonpetroleum imports were about 90 percent above their 1980 level. The additional increase reflects large increases in U.S. income and real domestic demand, and the need for the heavily indebted developing countries to run external surpluses in order to service their debts. There is, therefore, little mystery about the rapid growth of real imports between 1980 and the end of 1985.

From the end of 1985 to the end of 1986, U.S. real nonpetroleum imports increased 10 percent; from the end of 1986 to the end of 1987, they increased a further 6 percent. Some of these increases can be explained by the growth of real domestic demand (2.7 percent in 1986 and 3.2 percent in 1987) and, especially for 1986, by the delayed effects of earlier reductions in relative import prices. However, in view of the substantial depreciation of the dollar beginning in early 1985, the continued rapid growth of real nonpetroleum imports in 1986 and 1987 appears somewhat out of line with earlier empirical relationships. This continued strong growth of real imports, not a smaller than normal response of real exports, accounts for the failure of U.S. real net exports to improve as rapidly as would normally be expected, given the large adjustment in the foreign exchange value of the dollar.

Although the recent strength in real nonpetroleum imports is unusual given the sharp depreciation of the dollar, this strength is not unusual given the behavior of the relative price of such imports. As illustrated in Chart 3–4, the relative price of nonpetroleum imports increased very little during the period of dollar depreciation. At the end of 1987 it stood just 0.5 percent above its level in the first quarter of 1985 (and only 2.9 percent above its lowest level in the fourth quarter of 1985), despite a 40 percent depreciation of the dollar. Econometric studies suggest that the relative price of nonpetroleum imports normally would have risen about 25 percent in response to dollar depreciation, rather than the amount actually recorded. It appears that the very limited response of relative import prices largely accounts for the failure of real import growth to slow to the extent that normally would be expected, given the size of the dollar's decline.

PROFIT MARGINS AND IMPORT PRICES

A substantial decline in the cost of materials purchased by foreign exporters partially accounts for the slow rise in relative import prices in the United States since 1985. Measured in U.S. dollars, the price of oil in 1986 averaged about half its level in 1985. One commonly cited index of the dollar price of raw commodities fell 13 percent between early 1985 and late 1986. Other factors being equal, reductions in the dollar cost of raw materials allow foreign exporters to reduce the dollar prices of U.S. imports without reducing their profit margins. However, if appreciation of foreign currencies and movements in foreign labor costs are considered, the decline in materials costs only partly explains the limited increase of import prices in the

United States during the period of dollar depreciation. Apparently, the profit margins of foreign exporters have absorbed much of the effect of dollar depreciation.

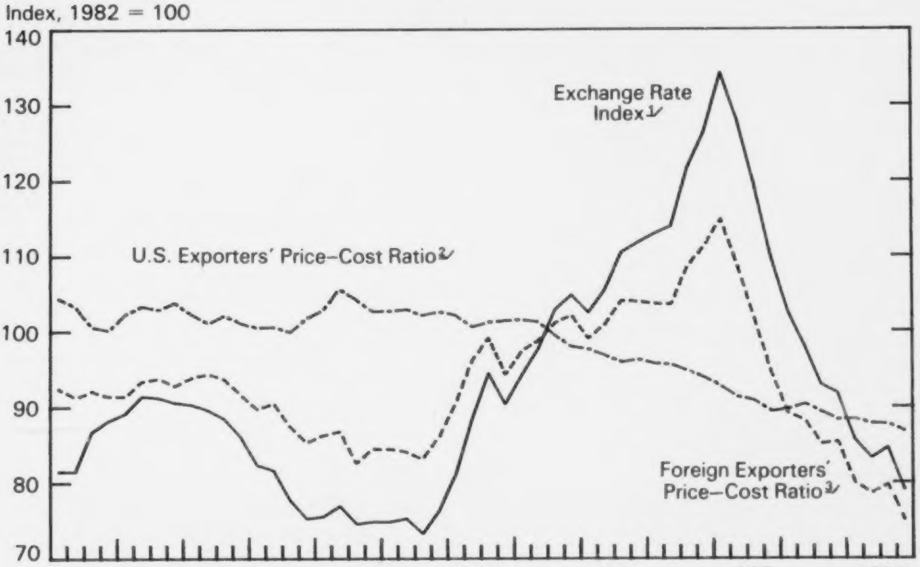
The profit margins of exporting firms typically absorb some of the effect of movements in exchange rates. This appears to be true to a limited extent for U.S. firms exporting to foreign markets and to a greater extent for foreign firms exporting to the United States. When the dollar appreciates, U.S. exporters—whose costs often are determined in U.S. dollars—may not raise their prices in foreign markets (quoted in foreign currencies) in the same proportion as the dollar appreciates. Instead, to help preserve their market share abroad or for other reasons, they sometimes will absorb part of the effect of dollar appreciation by reducing their profit margins on export sales. Conversely, when the dollar depreciates, U.S. exporters may not cut their prices in foreign markets in the same proportion as the dollar's decline, and their profit margins may expand. Similarly, foreign exporters to the United States may not cut their prices in U.S. markets as much as the dollar appreciates or raise their prices here as much as the dollar depreciates.

The evidence concerning adjustment of profit margins in response to exchange-rate changes is largely inferential. Some evidence is available in some specific cases, but there are no comprehensive data on profit margins in different national markets for U.S. firms or for foreign firms. It is possible, however, to construct proxy measures of the ratio of prices to costs that indicate general movements in profit margins. For U.S. exporters, the dollar price of U.S. nonagricultural exports is taken as a measure of prices received in foreign markets. If this price is divided by the U.S. producer price index (PPI) for finished goods, a proxy price-cost ratio for U.S. exporters can be constructed. For foreign exporters to the United States, the dollar price of U.S. nonpetroleum imports is one measure of prices received. If this price is divided by the foreign wholesale price index converted into U.S. dollars using market exchange rates, a proxy price-cost ratio for foreign exporters to the United States also can be constructed. An increase in this price-cost ratio generally suggests an increase in the corresponding profit margin, but the relationship probably is not exact. However, alternative measures of the price-cost ratio show generally similar movements.

The behavior of the price-cost ratios for U.S. and foreign exporters is illustrated in Chart 3-5. The levels of the two indexes are not particularly meaningful, but their movements in comparison with movements in the Federal Reserve's index of the foreign exchange value of the U.S. dollar are important. Basically, the price-cost ratio for U.S. exporters shows relatively little movement, although there is a fairly consistent downward trend beginning in 1982. In contrast, the price-cost ratio for foreign exporters moves in fairly close sympathy, although somewhat less than in proportion, with movements in the exchange rate.

Chart 3-5

U.S. and Foreign Exporters' Price–Cost Ratios and the Exchange Rate



1/Multilateral trade-weighted value of the dollar against the currencies of the G-10 countries plus Switzerland.

2/Ratio of the implicit price deflator for nonagricultural exports to the U.S. producer price index for finished goods.

3/Ratio of the implicit price deflator for nonpetroleum imports to a trade-weighted wholesale price index for eight industrial countries excluding the United States divided by the exchange rate index.

Note.—Data for fourth quarter 1987 are preliminary.

Sources: Department of Commerce, Department of Labor, Board of Governors of the Federal Reserve System, and Data Resources, Inc.

The behavior of the price-cost ratios relative to the exchange rate illustrated in Chart 3–5 is broadly consistent with the behavior of relative import and export prices illustrated in Chart 3–4. It appears that U.S. exporters basically price their products in dollars and in line with movements in domestic costs. The relative price of U.S. exports in foreign markets, therefore, moves in close sympathy with the exchange rate (Chart 3–4), while the price-cost ratio for U.S. exporters shows little relation with the exchange rate (Chart 3–5). The reverse largely holds for foreign exporters. The relative price of foreign exports moves to some extent in response to exchange-rate movements (indicated by the inverse relation between movements in the relative price of nonpetroleum imports and movements in the exchange rate in Chart 3–4), while the foreign price-cost ratio appears to absorb most of the effect of exchange-rate changes (Chart 3–5).

The decline in the price-cost ratio for U.S. exporters between 1982 and 1985 or 1986 is consistent with the fact that U.S. exporters were under heavy competitive pressure in foreign markets and chose to absorb some of this pressure in lower profit margins. The further decline of the price-cost ratio for U.S. exporters through 1987 is peculiar in view of the very large correction in the value of the dollar. Part of this anomaly may be due to deficiencies in the proxy measure of the price-cost ratio. An alternative measure, based on unit labor costs and raw materials prices rather than the PPI, does not show a decline in 1987; it is roughly constant throughout the 1980s. The strong growth of corporate profits for manufacturing firms in 1987 and the strong growth of exports suggest that profit margins were not falling.

The recent behavior of the price-cost ratio for foreign exporters suggests that their absorption of the effects of dollar depreciation at least partly explains the less-than-expected relative price increase of U.S. imports. The extent of such absorption also appears to have exceeded previous experience. Studies using alternative measures of the price-cost ratio or the profit margin for foreign exporters generally have confirmed these impressions.

Less than complete passthrough of measured dollar depreciation to import prices may result from changes in the pattern of international trade. For example, the sources of U.S. imports may have been shifting in the direction of exporters with relatively lower production costs measured in U.S. dollars, including exporters located in countries whose currencies have appreciated relatively little against the U.S. dollar. In addition, some products imported into the United States have been subject to quantitative restrictions imposed by the United States or by the countries of origin. The prices of such imported products in U.S. markets are influenced strongly by these restrictions, rather than by exchange rates.

Less than complete passthrough is also consistent with economic theory. Foreign producers whose costs tend to rise with increased output and whose sales have been falling (in both domestic and foreign markets) probably have been experiencing declining production costs, especially at the margin. Such producers naturally would cut their prices in line with declines in their marginal production costs, even if their profits (taking account of fixed costs) were falling. Furthermore, for a foreign producer whose dollar prices are higher than production costs, holding the dollar price constant and cutting the profit margin may retain more profits when the dollar depreciates than raising the dollar price and suffering substantial sales losses.

Moreover, if a large share of a foreign producer's total sales are in the U.S. market, primarily in competition with U.S. producers, there may be little alternative to maintaining dollar prices even when production costs in terms of dollars rise due to appreciation of the producer's home currency. Some of the profit shrinkage may be passed back to the foreign producer's workers and suppliers, who also recognize their indirect dependence on sales in the U.S. market. Because of the large size of the U.S. market, this situation is more likely to arise for foreign firms selling in the United States than for U.S. firms selling abroad. Finally, as a general marketing strategy, firms may find it advantageous to maintain stable prices despite fluctuations in production costs arising from exchange-rate changes or other factors. This may be especially important if brand loyalty is a significant sales factor, if production costs are a relatively small share of the final sales price, or if fluctuations in production costs are viewed as temporary.

Whatever the reason for the relatively limited passthrough of dollar depreciation to U.S. import prices through the end of 1987, the most recent depreciation of the dollar and some of the residual effects of earlier depreciation may have a more substantial effect on import prices in the future. During the past year dollar depreciation has become more general against a broader range of currencies, and some quantitative restrictions on imports that were previously important are becoming redundant. Presumably there is also a limit beyond which profit margins cannot reasonably be squeezed. Furthermore, foreign producers may now recognize that much of the dollar's depreciation since 1985 is likely to prove permanent, so previously delayed price adjustments may now be made.

In sum, U.S. exports appear to have a good potential for growth, while economic forces are working to slow, if not partially reverse, the growth of imports. Because of strong productivity growth, effective cost containment, and exchange-rate adjustment, U.S. exporters already have regained the international competitive position they held in 1980–81 when the United States had a substantial surplus of real net exports. The additional depreciation of the dollar during the fourth quarter of 1987, and the continuing passthrough of some of the effects of earlier depreciation, should enhance export competitiveness further. Provided that costs remain effectively contained and demand growth continues in foreign markets, real U.S. exports should continue their recent vigorous growth. For real U.S. imports, increasing passthrough to relative import prices of the effects of recent and earlier dollar depreciation should limit growth. Anticipated slow growth of real domestic demand is an additional factor limiting likely growth of imports. Thus with import growth restrained and exports growing strongly, improvements in real net exports should contribute substantially to overall U.S. economic growth.

THE ADJUSTMENT PROCESS

Reduction of external imbalances requires substantial macroeconomic and structural adjustments that may be difficult to achieve rapidly without endangering the fundamental objective of maintaining economic growth with low inflation. To be successful, therefore, the process of reducing external imbalances must be gradual. It also must be persistent. The apparent response of financial markets to disappointing news about external imbalances suggests that an undesirably rapid pace of adjustment could be forced if external imbalances are not steadily reduced. Moreover, the incentives to undertake the necessary structural adjustments probably are enhanced when the need for, and reward from, such adjustments are apparent.

Consider the necessary macroeconomic adjustment in the United States. In the fourth quarter of 1987 the U.S. deficit in real net exports was equivalent to about 3 percent of real GNP. As a matter of arithmetic, elimination of this deficit requires that real GNP rise about 3 percent relative to real domestic demand, or equivalently, that real domestic demand fall by about 3 percent relative to real GNP. Yet, since the Korean war, there has been only one period longer than a year and a half when annual growth of real GNP has consistently exceeded annual growth of real domestic demand by close to a percentage point. This period lasted just over 2 years and it included 1980, when a sudden drop in real domestic demand drove the economy into a sharp recession. The danger is that without the assurance of substantial, persistent improvement in the trade balance, slow growth of real domestic demand increases the risk of recession. Prudence, therefore, suggests that several years be allowed to achieve the large necessary reductions in the U.S. real net export deficit.

For other countries, excessively rapid reduction of the U.S. net export deficit also poses significant macroeconomic problems. In the world as a whole, demand growth must equal output growth. Therefore, if slower domestic demand growth in the United States is not offset by more rapid domestic demand growth in other countries, world output growth would suffer, and the effects would not be limited to the United States. Slow growth or outright decline of U.S. imports means slow growth or outright decline of other countries' exports. This process could be mutually reinforcing, increasing the risk of worldwide recession. Moreover, there appear to be practical limits to the growth of real domestic demand that can be expected in other countries. Given the objective of sustaining world output growth, therefore, there are practical limits to the desirable rate of reduction of external imbalances.

Because the tradable goods and services sector of the U.S. economy is roughly 40 percent of the total economy, the structural adjustments required to reduce the U.S. trade deficit are relatively larger than the macroeconomic adjustments. To reduce the real net export deficit by 3 percent of GNP, production of tradable goods (including tradable services) must expand by about 7.5 percent relative to consumption of tradable goods. Except in an economic downturn, U.S. consumption of tradable goods is unlikely to decline over a sustained period. Indeed, the need to expand productive capacity in the tradable goods sector is likely to keep domestic demand for tradable capital goods relatively strong. Therefore, reduction of the trade deficit in an environment of economic growth likely will require significant expansion of domestic production of tradable goods.

In 1987 production of tradable goods probably expanded at about a 5 percent rate (the growth rate of industrial production), and the rate of capacity utilization increased significantly. Sustaining output growth at a 5 percent rate probably would be feasible if productive capacity were expanded sufficiently rapidly. However, at this rate of output growth, it would take several years to close the gap between production and consumption of tradable goods. In a growing economy with the unemployment rate already down to 5.7 percent, pushing adjustment of the tradable goods sector too fast could generate undesirable cost pressures that, among other problems, could erode the international competitiveness of U.S. producers.

For other countries whose trade positions must adjust as the U.S. position improves, their structural adjustment problem is essentially the opposite. Production of tradable goods must decline relative to consumption of tradable goods. This adjustment will be easier and less painful to achieve, especially for workers and firms in the tradable goods sector, if it occurs gradually through a shift in the relative growth rates of tradable goods production and consumption, rather than suddenly through an absolute decline of tradable goods production. In the United States, it should be recalled, even though adjustments in tradable goods industries often were difficult during the period of the growing U.S. trade deficit, output of most tradable goods industries (particularly manufactures) continued to expand in line with the overall economy.

Moreover, outright contraction or very slow growth of tradable goods industries in foreign countries could impair overall economic growth there. Resources need to shift away from tradable goods and toward nontradable goods. However, unemployment of resources in the tradable goods sector means temporary income losses that may limit spending and thereby impair domestic demand growth essential to maintaining overall growth in the world economy. These difficulties could be magnified if investment in the tradable goods sector drops precipitously without offsetting increases of investment in other sectors. Thus all trading nations share a common interest in avoiding adjustment pressures that are ultimately too strong and self-defeating.

CONCLUSION

Macroeconomic and structural adjustments in the United States and other countries have begun to reduce external imbalances in an environment of sustainable noninflationary growth. That process will continue in 1988 and beyond. Growth of real domestic demand has slowed in the United States, and it appears likely to remain relatively slow in the period ahead. Federal deficit reduction, together with prospective improvement in the private saving-investment balance, should improve the national saving-investment balance. Growth of real domestic demand abroad has accelerated due to government policies and market forces. Relative price adjustments resulting from the substantial correction in the foreign exchange value of the dollar already have brought, and will continue to bring, reductions in worldwide external imbalances. These relative price adjustments have helped to stimulate stronger internally led growth in foreign economies and to motivate necessary structural adjustments both in the United States and abroad.

Clearly, it is important to maintain policy momentum in the macroeconomic area, as well as to continue progress in reducing structural rigidities and barriers to adjustment, especially in economies with high unemployment rates. Reduction of marginal tax rates, of burdensome government regulations, and of inefficient government subsidies and, when appropriate, judicious easing of monetary policy and increased spending on worthwhile public investments can contribute to demand and output growth without raising risks of inflation. Elimination of restrictive work practices, excessive nonwage labor costs, expensive job security arrangements, rigid work rules and wage restraints, and other labor market practices that impair mobility and discourage job creation can contribute to both growth and adjustment. On the consumption side, reform of government policies that prevent efficient use of scarce land and removal of artificial restraints on mortgage and consumer credit can aid growth under appropriate circumstances.

Finally, maintenance of an open system of world trade is essential to the process of reducing external imbalances in an environment of noninflationary growth for the world economy. Specifically, the growth-oriented method for gradually reducing external imbalances requires stronger demand growth in foreign countries while demand growth remains restrained in the United States. This will allow improvements in the U.S. trade balance to come primarily from an expansion of exports, rather than a sharp cut in imports. For this method to work, foreign markets must be open to U.S. exports. The alternative method for reducing the U.S. trade deficit—protectionism at home and retaliatory market-closing measures abroad—is a prescription for worldwide economic stagnation. Especially now, when U.S. industries have regained international competitiveness and export growth appears likely to sustain economic expansion, the United States has a particular interest in avoiding protectionism and pursuing instead its program for freer and fairer trade.

CHAPTER 4

Expanding Trade and Avoiding Protectionism

TWICE IN THIS CENTURY the United States has taken the lead in setting a new course for the world's trading system. The first time was in 1930 with the passage of the Smoot-Hawley Act, which led to global protectionism and contributed to the Great Depression. The second time was after World War II with the process of trade liberalization brought about through the General Agreement on Tariffs and Trade (GATT). The result was more rapid recovery from the destruction of war, the unprecedented expansion of world commerce, and increased prosperity in the industrialized and developing countries.

The Smoot-Hawley Act and GATT both taught that the United States has a large influence on the world economy, for better or worse. Likewise, the actions taken in the coming months regarding American trade policy have the potential to influence the course of international trade for years to come.

Recognition of the immense benefits of trade is a fundamental principle of American economic policy. The framers of the U.S. Constitution saw the wisdom of prohibiting all tariffs and duties on the trade between the States. Today those trading States, together with the States that were added later, are among the most prosperous in the world. The same principles of trade apply to commerce between countries.

Although recent negotiations are improving U.S. access to a substantial portion of world markets, current domestic legislative proposals threaten to close U.S. markets and reverse many of the market-opening gains made over the past 40 years. On the positive side are the Canada-United States Free-Trade Agreement entered into on January 2, 1988, the United States-Mexico Framework Understanding signed on November 6, 1987, and other initiatives proposed by the United States in the ongoing Uruguay Round negotiations of GATT. On the negative side are proposed changes to domestic trade law contained in the Omnibus Trade and Competitiveness Act of 1987, the effects of which are potentially dangerous.

EXPANDING TRADE OPPORTUNITIES ABROAD

Both bilateral and multilateral initiatives are vital for expanding trade opportunities. In the past year bilateral agreements were successfully completed, and substantial progress was made at the multilateral GATT negotiations. During the coming year the multilateral GATT negotiations will become increasingly important.

CANADA-UNITED STATES FREE-TRADE AGREEMENT

In many respects a free-trade agreement between the United States and Canada is a natural consequence of longstanding friendship, common economic interests, and geographic proximity. Nevertheless, there is a history of numerous unsuccessful attempts over more than a century to reach a free-trade agreement. That an agreement was reached in 1987 stands as a major achievement. The two nations had to overcome special interests, internal pressures for the status quo, fears about loss of identity, and protectionism in order to craft a final document.

The outcome represents a victory for both countries. For the first time, the agreement firmly anchors free trade as the fundamental principle governing commerce between the two countries. It now remains for the U.S. Congress and the Canadian government to approve the understanding.

Canada and the United States are each other's largest trading partner. Measured in terms of national product, they will make up the largest free-trade area in the world. Chart 4–1 shows the relative importance of Canadian trade to the United States. In terms of bilateral trade, Canada represents 19 percent of all U.S. trade. As the chart shows, trade with Mexico represents 5 percent of U.S. trade, and trade with all other countries in the Western Hemisphere amounts to 7.5 percent.

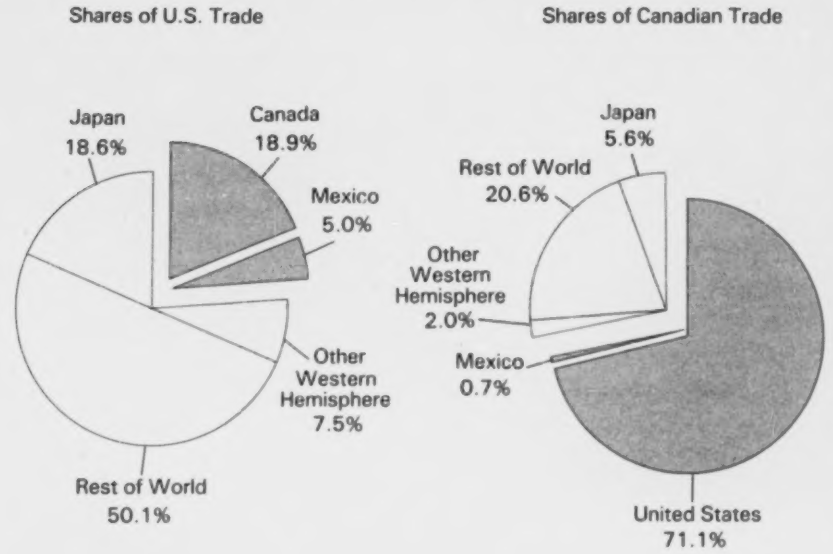
History

The United States and Canada share common origins as former British colonies. In spite of different political histories, the natural economic proclivities of the two nations have led them to greater cooperation and economic interdependence as the years have passed.

The earliest attempt at a free-trade agreement dates back over 140 years. Canada initiated discussions with the United States for bilateral free trade in the middle and late 1840s, in response to growing separation from the British market brought about by Britain's unilateral movement toward free trade and the repeal of the Corn Laws. In 1854, under the impetus of the U.S. desire for fishing rights on the east coast, a reciprocity treaty was signed covering free trade in natural products. The treaty was abrogated in 1866 by the United States,

Chart 4-1

Shares of U.S. and Canadian Merchandise Trade in 1986



Note.—Shares are based on the sum of bilateral exports and imports in dollars.
Source: Council of Economic Advisers, based on International Monetary Fund data.

due in some measure to British support for the South in the American Civil War and the ties between Britain and Canada.

In 1867 the Canadian provinces joined together in confederation. Seven years later the United States and Canada negotiated a new reciprocity treaty which failed to be confirmed by the U.S. Senate. Since that time sentiment in both countries has alternated on the notion of bilateral free trade, and the free-trade issue has been revisited frequently, including a half dozen times in this century.

Over the years the tariffs of both countries have been used to provide differing amounts of protection. In 1850 the average U.S. tariff level was 27 percent, and Canadian tariffs were 16 percent. U.S. tariffs rose to a high of 59 percent in 1932 following passage of the Smoot-Hawley Act, while average Canadian tariffs reached 24 percent in 1929. After World War II both countries' tariffs were reduced. The post-Tokyo Round average U.S. tariff was 4 percent, and the average Canadian rate was 7 percent, although tariffs on selected products were substantially higher.

Recognizing the natural economic benefits to both countries, the Canadian Royal Commission on the Economic Union and Development Prospects for Canada concluded in August 1985 that it was in Canada's interest "to engage the United States more directly in bilateral free-trade negotiations." In the United States the Trade Agreements Act of 1979 already had instructed the President to study "the desirability of entering into trade agreements with countries in the northern portion of the western hemisphere" for the mutual expansion of market opportunities. On September 26, 1985, the Canadian Prime Minister requested that the United States and Canada consider the potential for negotiating a comprehensive free-trade agreement. The request was accepted, and the President notified the Congress on December 10, 1985, of his intent to enter into bilateral negotiations, which began formally on June 17, 1986.

Benefits of a Free-Trade Area

Three-fourths of the trade between the United States and Canada is already duty free. Moving to a free-trade area expands the range of duty-free trade to cover all goods.

The reasons for creating a free-trade area are essentially the same as the reasons for encouraging free trade generally. Moving to an open trading regime brings gains associated with the freer flow of goods and better allocation of resources to productive uses. Allowing the Nation's households and firms to trade freely with foreigners means that domestic sellers can add the net demand of foreigners to domestic demand, thus expanding their market. Similarly, buyers can add the net foreign supply to domestic supply, expanding the total supply and lowering the prices of goods they purchase. Because, on average, prices fall for the products for which the country is a net purchaser and rise for the products for which the country is a net seller (a terms-of-trade improvement), the cumulative effect of freer trade is to increase welfare in both countries. Gains by one do not imply losses to the other.

Another benefit from enlargement of the market is greater opportunity for economies of scale in production, marketing, and distribution. Many products can be produced and sold at lower cost per unit if a larger volume is manufactured. A larger volume generally means lower prices to the consumer and a greater variety of products which can be profitably offered for sale in the marketplace. In addition, the incentives to invest in research and development in order to enhance technical knowledge and create new products are greater in a larger market. Again, these benefits can accrue to both countries at the same time.

Many of the effects of the Free-Trade Agreement, such as enhanced growth and the momentum given to ongoing negotiations to open markets worldwide, are difficult to quantify. Benefits in the form of lower prices to consumers (reduced cost of living) and increased profits to firms, however, can be modeled and quantified. Studies of the effects of the Free-Trade Agreement estimate that these economic gains to the United States are on the order of $1.1 billion to $2.9 billion annually. Most studies show that gains to Canada are of a similar absolute size. This stream of benefits is like an annuity that will grow over time with economic growth in the two countries. The present value of these gains ranges between $30 billion and $90 billion.

Because Canada is the smaller country, however, the effect of the free-trade area on returns-to-scale gains is more important for Canada. Studies show that these harder-to-quantify effects have the potential to increase Canadian gains severalfold.

If there are such obvious benefits to freer trade, then why is there opposition to it? One reason is the claim that removing trade barriers eliminates jobs or sends them abroad. But this argument is misleading because overall employment in an economy is determined by internal conditions and macroeconomic policy, not by the existence of trade barriers or the level of trade flows. The United States created nearly 15 million payroll jobs over the course of the current economic expansion, a period of U.S. trade deficits and relatively open U.S. markets. During the same period the European Community (EC) created virtually no net new jobs, even though they experienced trade surpluses. The same level of employment can be obtained in the total absence of foreign trade as when trade is completely free. But without foreign trade a nation will be worse off economically because, in effect, it will throw away part of its productive capability—the ability to convert surplus goods into other goods through foreign trade.

Free trade leads to industrial expansion in those industries in which a country has a comparative advantage. To expand in one sector, however, productive resources, including labor, must shift from other sectors. Thus employment may decline in some sectors, and there may be temporary unemployment during the transition. To halt such economic adjustments in order to prevent the loss of jobs in a particular sector, however, is to lose the benefits of international trade. (For a discussion of the Administration's proposal to aid the transition of workers to new employment, see the summary of the Worker Readjustment Program in Chapter 5.)

Elements of the Agreement

Visible Barriers. If both countries approve the agreement, beginning on January 1, 1989, all bilateral tariffs will be eliminated either immediately or in five or ten equal annual stages, depending on the product. Table 4–1 displays the average tariff rates by sector for each country as they apply to the other. In the clothing and footwear sectors, for example, Canadian tariffs on U.S. products are over 20 percent. Other sectors in both countries are protected by tariffs ranging from 12 percent down to nearly zero. Because each country retains its own tariffs on third-country trade, the agreement provides for rules of origin that require articles imported into one country to be sufficiently processed in the importing country before they can be exported duty free to the other. Thus goods cannot be imported into the country with the lower tariff and then exported duty free to the other country.

TABLE 4-1.—*Canadian and U.S. Bilateral Tariffs by Sector*

[Percent]

Sector	Canada		United States	
	Share subject to tariffs	Average tariff[1]	Share subject to tariffs	Average tariff[1]
Agricultural products	40	9.0	56	4.1
Forest products	33	10.6	9	3.7
Textiles, apparel, and footwear	74	20.9	92	10.4
Energy and chemicals	44	11.7	57	1.8
Minerals and metals	46	9.2	46	3.2
Machinery and equipment	18	9.2	16	4.5
Miscellaneous manufactures	36	11.8	51	6.1
ALL SECTORS	27	10.4	30	3.3

[1] Canadian averages are weighted by imports from the United States and vice versa. Average tariffs are calculated using only those products subject to tariffs.

Source: U.S. International Trade Commission estimates based on 1985 trade data.

The agreement also eliminates almost all quantitative restrictions on trade between the United States and Canada. In energy, quantitative restrictions on imports or exports are prohibited, with exceptions for national security considerations, prevention of the exhaustion of a finite energy resource, and a special exception placing an upper bound on the sales of Alaskan oil to Canada. If restrictions are imposed to prevent resource exhaustion, access must be granted to the other party sufficient to maintain a prescribed proportion of their purchases relative to total supply.

Canada is the largest supplier of energy to the United States, and it is also the largest importer of U.S. coal. Two-way energy trade has amounted to about $10 billion annually and is likely to increase as a result of the Free-Trade Agreement.

Canadians sometimes have argued that it is harmful for Canada to sell its energy resources to foreign countries. It is hard to support such a position when the move to free trade in energy implies higher prices for Canadian sellers, and when contracts to sell are freely entered into by both buyer and seller. From the Canadian point of view, the Free-Trade Agreement represents an assured market in the

United States. From the U.S. perspective, a unified market reduces uncertainties about future energy supply.

In agriculture, several significant quantitative restrictions will be liberalized, in addition to the elimination of tariffs and export subsidies. The United States has a comparative advantage in most fruit and vegetable trade. Seasonal quantitative restrictions remain in place, but they are relaxed under the agreement. Import restrictions on poultry products also will be lessened. Of general significance to agriculture, trade in fertilizers and other agricultural inputs will be liberalized.

Invisible Barriers. The past two decades have seen growth in the less visible, but economically damaging, nontariff and rule-based trade barriers. Invisible barriers to trade can take virtually an unlimited number of forms. Examples include discriminatory access to distribution systems for foreign goods relative to domestic goods, the application of standards and codes that restrict foreign goods, rules about government purchases (e.g., the "Buy American" provisions of U.S. law), failure to provide intellectual property protection for foreign processes and goods, and various procedural restrictions on foreign investment.

The Canada-United States Free-Trade Agreement makes progress in reducing a number of these barriers. For example, both countries now have agreed to provide national treatment to the investors of the other, subject to grandfathering existing regulations. Direct U.S. and Canadian investment in each other's economy currently totals over $68 billion. The free movement of capital across geographic boundaries allows resources to move to the location of their greatest usefulness and profitability, making the opportunities of the combined market available to the resources of both regions. After 3 years Canada will screen direct acquisitions by U.S. investors only when the Canadian company being sold has assets of $150 million or more in constant Canadian dollars. Canadian screening of indirect acquisitions (where a firm's ownership changes when ownership of its parent firm outside the country changes) by U.S. investors will be phased out completely. Other provisions eliminate certain performance requirements imposed by one party on investors of the other. Another section of the agreement ensures ease of border crossing by individuals traveling for business purposes.

The Canada-United States Free-Trade Agreement breaks new ground as the first bilateral agreement involving the United States which governs the entire financial sector. The agreement frees the capital, market share, and growth restrictions placed on U.S. banks in Canada (currently at least 15 U.S. institutions are affected), and it makes it possible for U.S. insurance firms to establish or acquire closely held commercial banks and federally regulated insurance and trust companies. Canadian financial institutions will continue to enjoy the open access already received in the United States. In addition, they are granted certain guarantees giving security of access to the U.S. financial sector.

The General Agreement on Tariffs and Trade is supplemented by an agreement on government procurement describing rules for foreign participation in domestic government procurement. After February 14, 1988, provisions of the code will apply to purchases by covered agencies of signatory governments of 130,000 special drawing rights (in 1987 $167,000) or greater in value. The previous cutoff was 150,000 special drawing rights. Under the Free-Trade Agreement that threshold is reduced for U.S.-Canadian procurement to $25,000. Previously, approximately three-fifths of Canadian government procurement was not covered by the code due to the high threshold. The procurement market affected by this agreement is estimated to be on the order of $500 million in Canada and almost $3 billion in the United States. Measures which strengthen current code disciplines and negotiations to improve the openness of the government procurement process are provided for in the agreement.

Both countries have agreed to refrain from using domestic technical standards as a barrier to trade. For example, they have agreed not to use in-country requirements for accreditation of testing facilities and certification bodies, and to recognize each other's systems for laboratory accreditation. Moreover, both countries will work to harmonize Federal standards when appropriate and to consult about potential problems before new standards are implemented.

Both Canada and the United States already have similar and effective laws for protecting intellectual property. However, the agreement resolves a number of problems in this area. In particular, Canada will extend copyright protection to the retransmission of copyrighted programming. Both countries have agreed to work in the Uruguay Round negotiations to enhance intellectual property rights protection worldwide.

The Canada-United States Free-Trade Agreement is the first major agreement to apply binding rules to trade in the services sector. Scores of service categories are covered, including telecommunications network-based enhanced services, computer services, professional services (accountants, architects, engineers, scientists, management consultants), tourism, insurance, construction engineering, and retail and wholesale trade. The basic principles underlying the agreement for services are national treatment (equivalent treatment of foreign and domestic nationals), access to domestic distribution systems, establishment of a commercial presence, transparency of rules and procedures, and dispute settlement arrangements.

Currently there are relatively few barriers to U.S.-Canadian trade in services, and bilateral trade is already open in most areas. The Free-Trade Agreement insures that the environment will remain open, governed by the principles enunciated in the agreement.

Other Provisions. The machinery and transport equipment sector, which includes road vehicles, accounted for $55 billion of bilateral trade in 1986, over 45 percent of bilateral trade between Canada and the United States. Under the Automotive Products Agreement of 1965 between Canada and the United States, a large part of trade in automotive products is already duty free. Under the Free-Trade Agreement, tariffs on all original equipment, tires, and parts will be eliminated; the Canadian embargo on used-car trade will be phased out in 5 years; and duty waivers on imports of automobile products linked to exports of automobiles to the other party will be stopped. At least one-half of the assembly costs and production materials in automobiles freely traded across the border must originate in the exporting country. To meet this requirement, averaging over a 12-month period on the relevant vehicle class is permitted. Recognizing the fast-changing nature of the automobile industry, the agreement mandates the establishment of a select panel to assess the state of the industry and make further recommendations for later consideration.

The concern over cultural identity, primarily by the Canadians, led the negotiators to exempt cultural industries from the provisions of the Free-Trade Agreement. Cultural industries include the publication of books, magazines, periodicals, or newspapers; the production and sale of films and video and audio recordings; the sale of music; and communication media for the general public (radio, television, and cable television). However, if one party takes actions which normally would have been prohibited, the other party is permitted to take measures of an equivalent commercial effect. Actions inconsistent with free trade, therefore, should be taken only rarely and for strongly held reasons.

The Institutional Features. As with any agreement between two sovereign parties, arrangements must be made to resolve misunderstandings and disputes that arise after implementation. Devising a dispute resolution mechanism suitable to both countries was a major difficulty in reaching a final agreement. The solution chosen to resolve disputes successfully and ingeniously blends the binational settlement process with the separate laws of each nation.

The agreement establishes the Canadian-United States Trade Commission to supervise implementation of the agreement and resolve disputes. The Commission, composed of members from both countries and led by Cabinet-level representatives, will meet at least once a year in regular sessions. Either country may request ad hoc consultations; if consultations are unsuccessful in resolving a dispute, either country may request a meeting of the Commission. If the Commission is unsuccessful in resolving a dispute promptly, it may establish a panel consisting of two members chosen by each country and a fifth member chosen by both countries from a predetermined roster. The recommendation of the panel would form the basis for the Commission's final determination, normally resulting in the nonimplementation or removal of a measure. If a country fails to implement the findings of a panel, then the other country has the right to suspend equivalent benefits.

The safeguards provisions, which address problems faced by industries harmed by increased fair trade, are separated into two parts. One part regulates safeguards for third-country trade. The United States and Canada are excluded from any actions taken by the other under Article XIX (the safeguards article) of GATT, unless goods of the other party contribute importantly to and are a substantial cause of the injury. If the other party is included in the action, the remedy cannot cut back imports from the other party to less than the level of imports over the base period specified by the agreement, with allowance for growth.

The other part addresses agreement-related injuries where it can be established that duty reductions resulting from the agreement caused the injury. In this case, the remedy cannot exceed the lesser of the most-favored-nation rate of duty in effect at that time, or preagreement rates of duty. Furthermore, the remedy can remain in effect for only 3 years.

In cases involving antidumping and countervailing duty law, the agreement sets up a separate binational dispute settlement mechanism. A panel is made up of two members chosen by each country and a fifth member chosen by both countries from a predetermined roster. The panel would replace judicial review by both the United States and Canada. Each country would continue to apply its own domestic antidumping and countervailing duty laws, but, upon request, the binational panel would review the administrative record of a disputed decision. After reviewing the antidumping or countervailing duty order for its consistency with the relevant law (statutes and judicial precedent) of the country applying the order, the panel has binding authority to sustain or remand the decision back to the relevant investigating authority.

No future changes to antidumping or countervailing duty law would apply to the other party, unless it is specifically stated to apply to the other country in the legislation, the changes are fully consistent with the GATT antidumping code and subsidies code, the other party is notified, and prior negotiations are entered into upon request. If a panel requires modification of the changes to the statutes because they are inconsistent with GATT, or because they overturn a prior decision of a binational dispute settlement panel, compulsory negotiations are mandated for 90 days. If a solution is not found, the other party may enact comparable legislation, take equivalent executive action, or terminate the agreement with 60 days' notice.

Viewed from the perspectives of economics, history, and international relations, the Canada-United States Free-Trade Agreement represents a remarkable achievement. In its implications for the future of U.S.-Canadian trade, the benefits which it secures for both countries, and the example which it sets for trade liberalization worldwide, it is truly an historic document.

THE UNITED STATES-MEXICO FRAMEWORK UNDERSTANDING

On November 6, 1987, the United States and Mexico signed an understanding concerning a framework of principles and procedures for consultations regarding trade and investment relations between the two countries. A bilateral consultative mechanism was set up to review trade and investment issues, resolve disputes, and negotiate the removal of trade barriers. The agreed upon principles and procedures supplement those in GATT.

Mexico is the third largest purchaser of U.S. goods, behind Canada and Japan. In 1986 U.S. exports to Mexico were $12.4 billion, while U.S. imports from Mexico were $17.6 billion, of which some $3.4 billion was crude petroleum. In trade terms the United States is more than 10 times as large as Mexico's second most important trading partner (Japan). The United States accounts for a full two-thirds of Mexico's total trade with the world.

In spite of the importance of trade between the United States and Mexico, the two countries have been without a formal mechanism to govern their commercial relations. Although the United States and Mexico generally grant one another most-favored-nation treatment and other benefits similar to those found in GATT, there was no formal channel to pursue the complaints that inevitably arise with such a large volume of trade. Agreeing to overcome this deficiency, the Presidents of the United States and Mexico decided in August 1986 to pursue the idea of a bilateral framework understanding. Formal discussions began in February 1987.

Under the bilateral mechanism, either party may request consultations at any time, to be held within 30 days of the request. Annual consultations will be held to review the status of the two countries' trade and investment relationship. The United States and Mexico also agreed to initiate discussions promptly in such areas as investment, intellectual property, electronics, textiles, agriculture, steel, and services sector information exchange.

The United States-Mexico Framework Understanding reflects the size and importance of the two countries' bilateral economic relationship. This step adds further stability to the relationship and signals the mutual commitment to resolve trade and investment problems expeditiously.

GENERAL AGREEMENT ON TARIFFS AND TRADE

In the past 35 years both world production and international trade have grown rapidly. Real global output rose at an average annual rate of 4.5 percent, while the real volume of international trade expanded by 6.5 percent per year. Through more efficient use of global resources, increased international trade leads to higher global living standards. GATT is partly responsible for the flowering of world trade.

GATT is a multilateral agreement that defines the responsibilities and operating rules of international trade that have been agreed upon by 95 signatory governments (contracting parties). As its preamble states, GATT's goal is to raise living standards through "reciprocal and mutually advantageous arrangements directed to the substantial reduction of tariffs and other barriers to trade and to the elimination of discriminatory treatment in international commerce." Four basic principles underlie GATT: (1) Member countries should work to lower trade barriers in general, and to eliminate the use of quotas in particular; (2) any barrier to trade should be applied on a nondiscriminatory basis to all member countries (the principle of most-favored-nation treatment); (3) once a tariff concession is made, it cannot later be rescinded without extending compensation to affected trade partners; and (4) trade conflicts should be settled by consultation.

The Uruguay Round of multilateral trade negotiations, officially launched at a Ministerial Meeting of GATT contracting parties in Punta del Este, Uruguay, in September 1986 is the eighth GATT-sponsored negotiating round since World War II and the first since the 1973–79 Tokyo Round. While an attempt was made to address nontariff barriers in earlier rounds, real progress was not made until the Tokyo Round, which resulted in nine agreements or codes pertaining to issues such as customs valuation, import licensing, technical standards for products, subsidies and countervailing duties, government procurement, antidumping duties, and rules governing trade in civilian aircraft.

This Administration played the principal role in developing a broad consensus among GATT members to launch the Uruguay Round. The centerpiece of the U.S. approach to the Uruguay Round is a bold effort to bring GATT discipline to agricultural subsidies and agricultural trade barriers. Also, due in large part to the efforts of U.S. negotiators, barriers to trade in services, restrictions on foreign investment, and the protection of intellectual property rights (beyond the limited area of counterfeiting) are on the negotiating table for the first time. In pressing for the launching of GATT's most ambitious multilateral trade negotiation ever, the United States is seeking to revitalize and strengthen an institution which has served it and the rest of the world well.

Functioning of the GATT System

The Punta del Este Ministerial Declaration endorsed a three-pronged approach to improve the functioning of the GATT system: enhanced surveillance (on a country basis as well as on a subject basis) of the contracting parties' trade policies; greater ministerial involvement; and closer links between GATT, the International Monetary Fund (IMF), and the World Bank. The Administration believes that these are among the most important reforms to GATT contemplated in the Uruguay Round. Besides fostering transparency and predictability, periodic individual country reviews under the surveillance mechanism would encourage trade policies that benefit the functioning of the international trading system in conformity with GATT intents and precedents. Increased ministerial involvement is expected to raise countries' political accountability within the GATT system and reinforce the free-trade principles on which it was founded. Improving GATT's policy management by linking its activities more closely to those of the IMF and the World Bank would ensure that their activities are complementary in improving the outlook for continued trade liberalization among GATT member states.

Dispute Settlement

Another institutional issue aimed at improving the effectiveness of the GATT system is reform of the dispute settlement mechanism of the General Agreement. There is widespread recognition that the existing consensual dispute settlement procedures do not always foster expeditious resolution of trade disputes. The United States has suggested possible improvements which might include an enhanced GATT mediation role, process timetables, improved panel procedures, avenues for recourse should panel reports be blocked, and the possibility of binding arbitration in certain instances.

Intellectual Property Rights

Reward for creativity and innovation are the principal driving forces for technological change which, in turn, is a great source of dynamism for world trade. But because of inadequate laws, or laws inadequately enforced, patent, trademark, and copyright infringement has grown worldwide. Legitimate firms have reduced incentives to invest in research and development when some of the returns will be pirated. Intellectual property thieves do not devote the large sums of capital needed to develop a new product. Hence, they are able to undersell legitimate competitors. And since the pirates only copy proven successes, they need never absorb the cost of failures. The U.S. International Trade Commission has estimated that lost sales due to infringement of intellectual property are up to $20 billion annually.

Under the auspices of GATT, the Administration seeks a comprehensive intellectual property agreement to establish and enforce intellectual property rights. The U.S. negotiating team has proposed a consultation and dispute settlement mechanism combined with strong rules governing domestic and border enforcement. Such an agreement covering inter- and intracountry measures would increase legitimate trade by raising standards of protection and the obligation to enforce them.

Services

Despite their large and growing role in world trade, now accounting for approximately 20 percent of the total, services have never been a significant area of negotiation in GATT before the Uruguay Round. Difficult new issues arise in services trade that do not arise in goods trade. For example, trade in services often requires local production of the service and, therefore, involves sensitive right-of-establishment and investment issues. The GATT concept of national treatment is based on the notion that a good receives the same treatment as domestic products once it has crossed the border into the importing country. The concept does not immediately carry over to services trade, because it must be applied to service providers as well as to the service itself. The issue of defining the proper "border," and when it is crossed, is different.

This Administration seeks a GATT services agreement which will provide a framework for future negotiations. The United States has proposed an umbrella agreement stating general trade liberalizing principles and second-level agreements or protocols for individual sectors. U.S. goals for services trade include greater transparency of domestic laws; nondiscrimination and national treatment for foreign-provided services; discipline on state-sanctioned monopolies; antisubsidy provisions; and consultation and dispute settlement mechanisms for trade in services. Since liberalization of trade in services is expected to continue for many years, the framework developed in the Uruguay Round must incorporate the flexibility needed to allow for growth and consideration of new issues.

Investment

Direct investment encourages trade in goods and services, boosts development, and contributes to the efficient allocation of resources throughout the world. With a free market in foreign investment, capital is allocated to those projects with the highest rates of return.

The United States is an example of the benefits of foreign direct investment, both as a host country and as an investor. In the 19th century the United States became a leading economic power with the help of foreign capital. After World War II, the United States became a leading provider of foreign direct investment in the world. More recently, the United States again has been attracting increased capital flows from abroad.

Unfortunately, many countries have attempted to stifle or distort the free flow of foreign investment, an action that also affects trade flows. Distortions include domestic content requirements, exchange controls, licensing requirements, technology transfer requirements, and requirements for a minimum level of exports by the foreign corporation operating in the host country. The U.S. goal in these negotiations is to identify and systematically address investment restrictions which have a trade-distorting effect and then to bring those practices within the framework of GATT.

Agriculture in the Uruguay Round

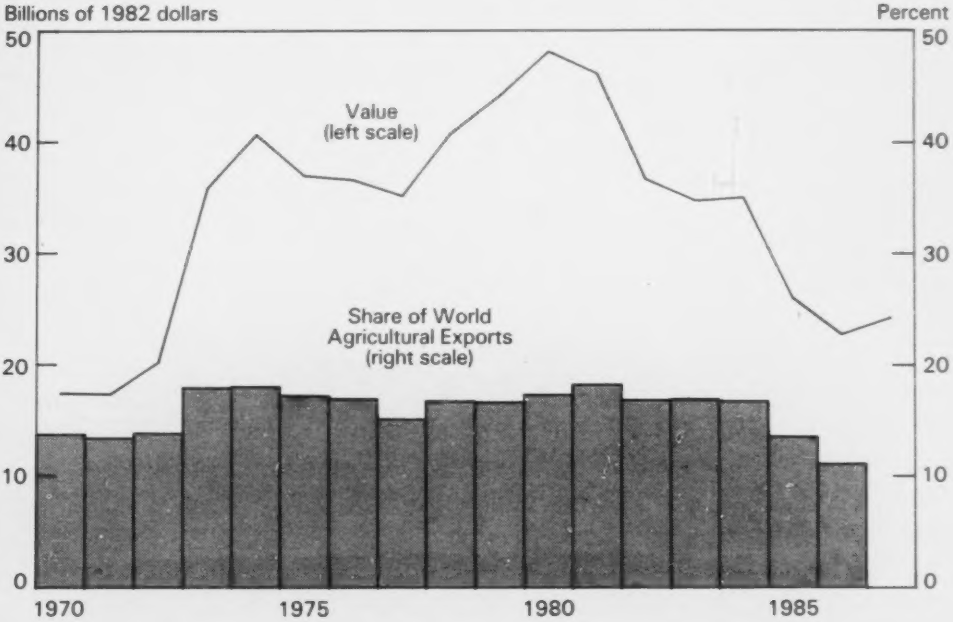
The United States has proposed the elimination of all policies that distort world agricultural production, prices, and trade. Since domestic farm programs and trade policy are fundamentally bound together, free trade in agriculture requires reform of domestic agricultural policies as well as border measures such as tariffs and quotas.

World Agriculture in Disarray. The current round of multinational trade negotiations has begun at a time of stress in world agriculture. Recently, both world market prices and trade volumes have been low, and farm programs worldwide have become more costly and distortionary.

Chart 4–2 shows the changes in the real value of U.S. agricultural exports and the U.S. share of world exports. World and U.S. agricultural exports both expanded rapidly in the 1970s, reached a peak in 1980, and have fallen since then. The U.S. share of world agricultural trade rose from 14 percent in 1972 to over 18 percent in 1981. Agricultural prices rose dramatically during the 1970s, increasing nominal exports sixfold while the real value of exports doubled. Then in the 1980s U.S. agricultural export prices and quantities fell for most commodities. In 1987 the quantities, values, and market shares for U.S. agricultural exports rose and prospects are good for the rest of the decade.

Chart 4-2

U.S. Agricultural Exports



Note.—U.S. value for 1987 estimated; world value not available.

Sources: Department of Agriculture, Food and Agricultural Organization, and Council of Economic Advisers.

World farm production, prices, and trade have been governed by numerous distortionary agricultural programs that frequently work at cross purposes. Many countries use a variety of policy measures that subsidize production or raise prices to consumers. These measures include tariffs, import quotas, variable import levies, export subsidies, price supports, direct government payments based on output levels, paid land diversions, production or input quotas, and subsidies for storage and inputs such as fertilizer, credit, insurance, fuel, and transportation.

One summary indicator of farm program effects, the producer subsidy equivalent (PSE), measures the loss of farm income that would result from the removal of a given set of policies (often reported as a percent of farm revenues). An analogous measure, the consumer subsidy equivalent (CSE), measures the total policy contribution to costs of farm output, often reported as a percent of expenditures. Table 4-2 shows average PSE and CSE measures for a variety of countries.

TABLE 4-2.—*Agricultural Subsidies for Producers and Consumers, Selected Countries, 1979–86*

[Percent of value[1]]

Country	Producers			Consumers		
	1979	1982	1986	1979	1982	1986
Australia[2]	7	13	11	(3)	(3)	(3)
European Community (EC-10)[4]	38	33	41	−22	−30	−32
Japan	68	67	79	−43	−43	−47
United States[5]	11	15	34	−10	−10	−17
Taiwan	(3)	15	23	(3)	−25	−29
South Korea	(3)	60	58	(3)	−52	−65
Nigeria[6]	−89	−34	−27	(3)	63	40
India	(3)	−27	−11	(3)	12	3

[1] Producer figures are subsidy equivalents as percent of farm sales value (PSEs); consumer figures are percents of value at first sale after the farm gate (CSEs). For dairy subsidies, sales value of primary dairy products is used. For Taiwan, Korea, Nigeria, and India, consumer subsidies are percents of consumer values at wholesale or retail levels. Positive figures indicate net subsidy; negative figures indicate that policies provide a net tax relative to no such policies. Commodity coverage varies, but for each country major grains, oilseeds, sugar, and livestock products are included, except as noted for Nigeria.

[2] Estimates do not include state policies, which would raise PSEs.

[3] Not available.

[4] Estimates do not include individual country policies, which would raise PSEs and lower CSEs. For 1979, data are for EC-9.

[5] State policies are minor and are not included, but general Federal subsidies such as for farm credit are included.

[6] Commodity coverage is limited to wheat, corn, rice, sugar, cotton, and cocoa.

Sources: Department of Agriculture (Economic Research Service), Organization for Economic Cooperation and Development, and Council of Economic Advisers.

In many developing countries, where farmers are a large but not particularly influential segment of the economy, producers are taxed and consumers subsidized for many agricultural goods. Thus PSEs are negative and CSEs are positive for most developing countries over a wide range of commodities. (See, for example, the average PSE and CSE for Nigeria and India.)

During the last decade policy distortions have been slowly reduced in developing countries, especially in Asia and Latin America. At the urging of the United States, the International Monetary Fund, and the World Bank, farm prices in developing countries have been allowed to rise so that they more nearly reflect world market levels.

In most wealthy nations, where agriculture is a small part of the economy and generally has been heavily subsidized, farm programs have become increasingly distortionary, leading to higher farm prices relative to world prices, more restrictive import barriers, and increased government subsidies. Crops such as sugar or wheat are grown at high cost in nations using price supports and import barriers, and then surpluses are exported to the world market with the aid of large subsidies. World prices of many commodities have been depressed by these policies, imposing a severe economic burden on export-dependent countries that would have a comparative advantage in the absence of these distortions.

In the United States, farm programs have become particularly costly and complex. Table 4-2 shows that overall PSEs in the United States doubled in the 4 years from 1982 to 1986. The 1981 Agriculture and Food Act mandated high price supports at a time when world market prices were falling. In 1983 farmers were paid to cut back output; surpluses were reduced temporarily, but U.S. participation in world markets also declined. The Food Security Act of 1985 reduced price supports, increased the removal of land and other resources from production, expanded the use of Federal Government programs to aid exports, and maintained target prices at up to twice the market price or more. In 1985 the United States also began the Export Enhancement Program, to counter the subsidies of other exporters (mainly the EC). As a result of these policies, Federal outlays for commodity programs reached $26 billion in 1986, and net farm incomes have been high, despite low market prices.

Agricultural production and consumption also is distorted throughout Europe. The Nordic countries, Switzerland, Austria, and the EC all maintain high producer and consumer prices and restrict imports. During the 1980s EC surpluses have been sold on world markets with the help of export subsidies. Table 4-2 shows that the average PSE for the EC is above 40 percent, and EC buyers pay over 30 percent more because of these farm programs. The Common Agricultural Policy cost taxpayers and consumers of the EC about $60 billion in 1986.

Japan has long been a net agricultural importer, but it distorts world agricultural trade by holding its domestic prices high and limiting access to its markets. For wheat and rice, Japan now has a support price greater than five times the world market price. Japanese producer and consumer prices for many agricultural goods are often twice the world market price. Japanese consumers spend about 20 percent of their income for food, compared to less than 15 percent spent by consumers in the United States.

Many countries continued to pursue policies that increased agricultural trade distortions during a period of slowly liberalizing world trade partly because, at the urging of the United States over 30 years ago, GATT prohibitions on import quotas and export subsidies were not applied to agriculture. During the GATT negotiations held over the past 30 years, few important agreements have been reached for liberalizing trade in agricultural commodities.

The most serious distortions and barriers related to international agricultural trade are caused by domestic programs in the industrialized countries that transfer income from consumers and taxpayers to owners of agricultural resources. Because these programs have been considered part of domestic policy, rather than international trade policy, it has been particularly difficult to include them in international negotiations.

The U.S. GATT Proposal in Agriculture. In July 1987 the United States put forward a GATT proposal on agriculture consisting of three major parts: (1) an elimination, gradually over 10 years, of all subsidies that distort agricultural trade either directly or indirectly; (2) an elimination, gradually over 10 years, of all barriers to agricultural imports; and (3) international harmonizing of health and sanitation regulations so that differences cannot be used as indirect trade barriers.

The U.S. proposal would not prohibit GATT contracting parties from transferring income to agricultural groups. Nor would it restrict bona fide foreign aid or domestic food assistance. Only those programs that have a direct or indirect effect on international trade, including output subsidies, would be restricted.

Reactions to the U.S. proposal have been encouraging. The October and December meetings in Geneva of the negotiating group on agriculture included additional formal proposals. The proposals by both Canada and the Cairns Group (an informal organization of self-proclaimed "nonsubsidizing" nations that includes major exporters from developed and developing nations) were consistent with the U.S. initiative. These proposals sent a clear signal that Canada and other Cairns Group members would be working together with the United States in this GATT round.

The EC and Japan have been expected to resist efforts to liberalize agricultural trade. However, at the October GATT meeting the EC endorsed multilateral reductions of subsidies and the separation of income support from production. As was expected, the EC also suggested a number of short-term measures involving supply controls and market sharing that would run counter to a move to freer trade. Their proposal as a whole, however, leaves the negotiations on track.

Formal GATT proposals from the Nordic countries, Japan, and some other importers were made available in December. The Japanese agreed that subsidies generally should be reduced, but they have emphasized the maintenance of some of the current array of import barriers. Japan and some other countries have argued that, since they are already major importers of farm goods, their production subsidies and import barriers are not a significant problem. However, they undoubtedly would import much more in the absence of barriers. The Japanese recognize that they have much to gain from the Uruguay Round because of Japan's position as a major exporter of manufactured goods. Domestic political pressures in Japan in support of agriculture are strong, but international and domestic pressures to join in the move toward free trade are also considerable.

Consequences of Liberalization. Because liberalization offers very significant potential benefits, organizations such as the World Bank, the Organization for Economic Cooperation and Development (OECD), and the U.S. Department of Agriculture have studied the likely pattern of prices, production, and trade flows that would follow as a consequence of world policy reform. A variety of studies have used different methodologies, different underlying assumptions, different base periods for comparison, and somewhat different policy scenarios. Given these differences, the conclusions are remarkably robust.

Removing agricultural barriers and ending subsidies is projected to foster a major expansion in international trade. Compared to what agricultural trade would likely be in the mid-1990s without reforms, world wheat exports are projected to rise somewhat, and coarse grain and rice exports are projected to expand substantially. In red meats and dairy products, international trade is projected to more than double. East Asia, Europe, and other restricted markets are expected to experience major growth in imports. The United States is expected to profit from a major expansion in exports of several commodities such as tobacco, coarse grain, and meats. U.S. coarse grain sales also would expand in the domestic market because of the expansion of the U.S. livestock industry, which in turn would be free to sell meat directly to currently restricted import markets.

Export prices under free trade are projected to be slightly higher for coarse grains and poultry, in the range of 10 to 30 percent higher for wheat, rice, and sugar, and up to 50 percent higher, or more, for beef and dairy products. Prices paid to U.S. producers of program crops are projected to be higher under free trade than current world prices, but lower than current target prices (or support prices in the case of sugar and dairy products).

Removing trade barriers also would reduce substantially the instability of world commodity prices, a factor now used as a rationale for many farm programs. Because consumers and producers in many countries now are insulated from world markets, weather and yield shocks are not dampened and absorbed through supply and demand responses in the full world market. Free trade is projected to reduce world price variability by 20 to 80 percent for major farm commodities. Large reductions in price variability are projected for beef, wheat, and dairy products, and smaller changes are expected for coarse grains and sugar.

Potential world welfare gains from free trade are substantial. A variety of estimates for large but limited groups of countries and commodities range from $40 billion to $70 billion per year. Trade liberalization that included all industrialized and developing countries and all major crop and livestock markets probably would increase world well-being by significantly more. One careful study has found that, compared to projections without reform, U.S. farmers would gain from multilateral liberalization, and, compared to a potential unilateral reduction in subsidies, their gains would be substantial. Farmers in the developing countries clearly would gain, although their urban consumers would lose. Consumers in Europe, East Asia, and other restricted markets also would benefit. They would enjoy lower food and fiber costs, because they would be allowed to import without restriction from the United States and other efficient producers. Their income gains would be spent on increased imports of nonfarm goods as well, thus improving trade balances.

Under the GATT proposal, the United States would end its distortionary and costly farm production subsidies and the output restrictions that accompany them. However, the United States and other nations would be free to provide transition support and income transfers as long as such aid did not subsidize production or otherwise interfere with trade. The removal of barriers would expand the use of the more efficient agricultural resources in the United States and could increase the demand for farm inputs and marketing services as well.

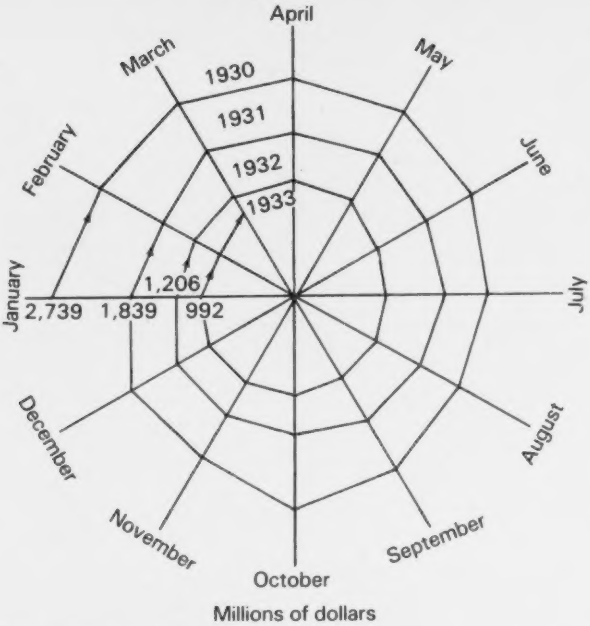
Potential now exists to achieve the first substantial reform since the series of ever-increasing agricultural distortions began. Major international agreement requires patience and persistence, but success in the Uruguay Round would improve well-being throughout the world.

THE PROTECTIONIST THREAT AT HOME

The United States has gone through numerous periods in its history when the sentiments for protectionism gained ascendancy. These episodes typically were associated with times of economic downturn or regionalist sentiment, the early counterpart of special interest politics today. The most recent period of this nature occurred more than 50 years ago with the passage of the Smoot-Hawley Act of 1930, probably one of the most damaging pieces of legislation ever signed in the United States. Passed after the stock market crash of 1929, Smoot-Hawley attempted to benefit U.S. agriculture and manufacturing by raising tariff rates. But it had the opposite effect and caused retaliatory tariffs to be put in place by foreign trade partners. More than 60 nations responded within 2 years with tariffs of their own. World trade fell dramatically. Chart 4–3 shows the spiraling decline in world trade between the beginning of 1930 and the first part of 1933. Far from being beneficial, Smoot-Hawley helped turn the 1930s into a depression.

Chart 4-3

Contracting Spiral of World Trade



Note.—Data are total imports of 75 countries.

Sources: Charles P. Kindleberger, *The World in Depression, 1929-39* (Berkeley, California: University of California Press, 1973); data from League of Nations, *Monthly Bulletin of Statistics*, February 1934.

The concerns and frustrations over trade felt today by the Congress, the President, and the American public stem from the large trade deficits which the United States has been running since 1982. As discussed in Chapter 3, the macroeconomic cause of the trade deficit is related to the tremendous growth in Federal spending (22.8 percent of gross national product (GNP) in 1987 versus 20.6 percent in 1979) relative to the also substantial growth in taxes (19.4 percent of GNP in 1987 versus 18.9 in 1979) and the harmful effect of the resulting Federal deficit on the savings-investment balance in the United States. Yet the Congress has responded by seeking to eliminate various foreign trade practices. Many provisions of the trade bill (H.R. 3) passed by the House of Representatives, and the version passed by the Senate, both of which embody these frustrations, are distinctly protectionist. Protectionism is also the motive of recent legislative proposals such as the Textile and Apparel Trade Act (H.R. 1154) passed by the House of Representatives. Ironically, since the macroeconomic causes of the trade deficit are not addressed by these actions, they are likely to have little or no influence on reducing the trade deficit, although their protectionist influence could be harmful and long lasting.

The lesson from Smoot-Hawley is that passage of protectionist trade legislation by the United States will increase protectionist activity in the rest of the world, poison the international climate for trade diplomacy in general, and slow the process of trade liberalization for years to come. Since the United States is a major trading nation, it could suffer major economic losses in the event of increased global protectionism.

PROTECTIONIST TEXTILE LEGISLATION

Two of the most protected industries in the United States today are textiles and apparel. The costs which this protection places on the American family and consumer are enormous, running in the range of $200 to $400 per year per household.

In a major protectionist effort, the House of Representatives passed in 1987 the Textile and Apparel Trade Act which would raise the wall of protection even higher, adding another $280 to $420 in costs per household over the first 5 years. Similar textile legislation was passed by the Congress in 1986 and vetoed by the President. The current bill would set a 1 percent annual growth limit on U.S. global imports of textiles and apparel, freeze shoe imports at 1986 levels, and, for the first time, restrict imports from Canada and the European Community.

The textile and apparel industries do not need greater protection. In 1986 textile industry profits rose 67 percent. Capacity utilization for textile mills was 94.2 percent in the third quarter of 1987, compared with an average capacity utilization rate of 81.2 percent for all U.S. industries. U.S. textile and apparel exports rose 15 percent in 1986 and are estimated to rise another 18 percent in 1987. Average hourly earnings and employment in both sectors continued to rise through the third quarter of 1987. And while the Congress would seek to limit textile import growth to 1 percent a year, U.S. consumption of textiles rose 8.7 percent in 1986.

Regrettably, the Congress frequently considers the larger economic interests of American consumers to be less important than the interests of particular industries. As with other protectionist measures, consumers would have to pay for the special interest legislation, losing more in increased costs than the gains to those who benefit from the legislation. In the United States, the equivalent rate of tariff protection on textiles and apparel already amounts to roughly 50 percent—ten times higher than average U.S. tariffs. H.R. 1154 would cost consumers between $25 billion and $37 billion in the first 5 years, above and beyond the $20 billion to $40 billion annually they already pay because of existing tariffs and quotas.

In addition to generating net economic losses for the country as a whole, the textile bill would act like a regressive tax, hurting those most who can afford it least. Because of the large share of income they are forced to devote to clothing, low-income families—especially those with children—would be burdened disproportionately by this legislation.

EMBRACING PROTECTIONISM—THE OMNIBUS TRADE BILL

The most threatening proposal being considered by the Congress is the Omnibus Trade and Competitiveness Act of 1987, the House and Senate versions of which amount to about 1,000 pages. The bill, which now must be considered in conference committee, includes many features which have only a tangential relationship to trade policy or which are inconsistent with U.S. policy in GATT. Among these are sections dealing with education grants, plant closing restrictions (Chapter 5), subsidies to agricultural programs, changes to domestic tax laws, and investment screening regulations. With so many provisions grouped together in one bill, the President is given little opportunity to consider them on their separate merits. Furthermore, the Administration is on record stating that many of the provisions are unwise and damaging to U.S. interests.

Although the trade bill would include tariffs and trade barriers, as Smoot-Hawley did, it represents a fundamentally different kind of protectionism. In the area of trade policy, the legislation would change the rules for administering U.S. trade law and for granting protection to U.S. producers.

Helpful Features

Every President since 1934 has had authority to enter into international trade agreements involving the reduction of tariffs, and to reduce U.S. tariffs by Presidential proclamation to carry out the country's trade objectives. This authority originally was employed to extricate the country from the economic disorder created by high tariffs after passage of the Smoot-Hawley Act. Tariff proclamation authority was renewed for every President thereafter until January 3, 1980. Reinstatement of this authority is a desirable feature of the trade bill.

A second desirable feature is the so-called "fast track" trade agreement authority which was used in the Canadian free-trade agreement negotiations and in the last round of GATT. Under a modification of the operating rules of the House of Representatives and Senate, the President is allowed to negotiate a trade agreement and present it with necessary implementing legislation to the Congress for acceptance or rejection without amendment within a specified period of time. This authority is important for U.S. credibility in international negotiations, because foreign countries are assured that agreements made at the bargaining table will not be undone later, apart from overall acceptance or rejection. However, the Senate version of the trade bill contains harmful "reverse fast track" provisions allowing the Congress to remove fast track authority at any time.

A third desirable feature of the trade bill is the authority to implement the Harmonized System of tariff schedules. Common tariff schedules greatly facilitate international interaction in trade issues. It is regrettable, and a keen source of disappointment to the Administration, that the Congress chose not to grant this authority in earlier legislation in time for the United States to join in implementing the new system on January 1, 1988. The United States, which was one of the original and principal supporters of the development of the Harmonized System, is now the only major trading country not to have implemented it.

Harmful Features

Unfortunately, the protectionist features of the trade bill outweigh the helpful features in number and in potential for harm. Legislation whose result is protectionist (increasing the number of trade cases filed and the amount of protection offered in response to them) would hamper the attainment of U.S. trade objectives in the rest of the world, damage global perceptions of the United States, and invite retaliation on U.S. products.

Many other countries perceive international trade agreements such as GATT as mechanisms to restrain U.S. antidumping and countervailing duties, whereas the United States views them as a way to control foreign subsidies and alleged unfair trade. In recent years the United States has filed more antidumping and countervailing duty cases than any other nation. The extensive use of U.S. antidumping and countervailing duty law as applied to Canada, for example, was the major difficulty in reaching agreement in the Canada-United States Free-Trade Agreement. The Canadians insisted on establishing a binational panel to review issues related to these laws before an agreement could be reached.

With passage of the omnibus trade bill, damaging protectionism would become embedded in U.S. trade law. Among the dangers are changes to the law designed to: (1) increase the number of cases brought against foreign competitors; (2) rearrange legal definitions and structures to increase the likelihood of finding injury or "unfairness" once a case is brought; and (3) increase the likelihood and magnitude of protection once a case is concluded.

The omnibus trade bill would remove Presidential judgment and discretion from the protection-granting process. Converting important portions of U.S. trade law to mechanical rules for bringing trade cases against foreign trade partners and eliminating case-by-case evaluation by the President would be a serious change in current practice.

Table 4-3 summarizes the four main sections of current U.S. trade law. The origins of present provisions date back many years, and their forms often represent decades of experience. Adjustments to the statutes, the most recent in 1984, frequently have been made to enhance industry access to protection under the various sections. The changes recently suggested, however, represent a sharp break from the past; they would throw out the wisdom that has been crafted into the statutes over time and replace it with untried and potentially dangerous alternatives.

TABLE 4-3.—*Principal U.S. Trade Law Provisions*

Statute	Focus	Criteria for action	Response	Responsibility
Section 201: Fair Trade (Escape Clause)	Increasing imports	Increasing imports are substantial cause of injury	Duties, quotas, tariff-rate quotas, orderly marketing arrangements, adjustment assistance	President (ITC recommendation)
Section 301: Unfair Trade	Foreign practices violating a trade agreement or injurious to U.S. trade	Unjustifiable, unreasonable, or discriminatory practices, burdensome to U.S. commerce	All appropriate and feasible action	President (Interagency recommendation)
Section 701: Subsidized Imports	Manufacturing, production, or export subsidies	Material injury or threat of material injury	Duties	ITC—Injury determination Commerce—Subsidy determination
Section 731: Dumped Imports	Imports sold below cost of production or below foreign market price	Material injury or threat of material injury	Duties	ITC--Injury determination Commerce—Dumping determination

Note.—Origin of current provisions: Tariff Act of 1930 (Smoot-Hawley), as amended; Trade Act of 1974, as amended; Trade Agreements Act of 1979, as amended; Trade and Tariff Act of 1984.

Source: Council of Economic Advisers.

Section 201. The escape clause provisions of current U.S. trade law provide assistance to industries injured as a result of an increase in fairly traded imports. The law is not designed to provide permanent protection, but to aid workers and firms temporarily as they adjust to increased imports. The petitioner submits its case to the U.S. International Trade Commission, which then undertakes an investigation, including public hearings, to determine if the growth in imports is a substantial cause of serious injury. If the U.S. International Trade Commission finds affirmatively and recommends that import relief be granted, the President must decide what method and amount of relief he will provide, including possible adjustment assistance.

Granting relief inevitably burdens other parts of the U.S. economy. Therefore, in his decision, the President is required to consider whether such relief is in the overall national economic interest. Relevant considerations include the impact of relief on industries and firms facing higher prices for their inputs, the effect of the relief on other U.S. international interests, the probability that the relief will be effective in promoting adjustment, and the costs imposed on taxpayers, consumers, workers, communities, and other "innocent" parties. In other words, a favorable recommendation by the U.S. International Trade Commission does not and should not lead automatically to protection being granted.

Changes proposed in the trade bill would narrow the definition of domestic industry used in Section 201 cases to cover only the domestic portion of production, only that subset of the industry which produces the like or competitive article causing the damage, and/or only the geographic area where the imports are concentrated. Narrowing the definition of domestic industry, of course, means that an injury finding would be easier, since non-injured parts of the industry would be removed from consideration.

Another change would alter the procedures for recommending protection once injury is found. The proposal would change the law to say that only those commission members who voted affirmatively (found injury) in the review would be eligible to vote on recommendations about relief. Without the moderating voice of the minority dissenters who failed to find that the foreign fairly traded goods injured the domestic industry, more protection is likely to be granted.

When a Section 201 case reaches the President, proposed changes in the Senate version would effectively require the President to accept the recommendation for protection, or else, in the House version, he would be removed from the process altogether. In the House version the President's authority would be given to the United States Trade Representative (USTR).

In the Senate bill the exceptions to granting protection would be rigidly curtailed. The President would be required to impose protection unless he certifies that protection endangers national security, disproportionately burdens agriculture, results in a net U.S. job loss, causes serious injury to a downstream industry, or burdens the poor disproportionately. The burden of proof would be changed, too. Protection would be imposed unless the President takes action to prevent it. With fewer reasons why protection could be rejected, and with overall national economic interest not among them, the probability of protection would be increased substantially.

Antidumping and Countervailing Duty Law. In the United States, as in GATT, dumping is considered unlawful when it injures domestic, import-competing industries. Dumping is deemed to occur when a product is sold in the United States at less than "fair value," that is, at a price lower than it is sold in the selling country's home market, or below its cost of production. Companies might engage in dumping because they maintain high prices in their less competitive home market, or because they lower export prices in hopes of capturing foreign market share. Furthermore, because exchange rates vary over time, firms may choose to hold dollar prices constant to retain export market shares and let profit margins in their domestic currency change.

Section 731 of the Tariff Act of 1930, as amended, directs the Department of Commerce to examine claims of dumping to determine whether imports are being sold at less than fair value. If the Department rules in the affirmative, the U.S. International Trade Commission then determines whether a U.S. industry has suffered material injury or the threat of material injury as a result of the specified imports.

Countervailing duty law is intended to offset any unfair advantages foreign producers might enjoy as a result of government production or export subsidies. In Section 701 of the Tariff Act of 1930, as amended, the Department of Commerce determines whether the specified imports have received foreign government subsidies. If the Department finds in the affirmative, the U.S. International Trade Commission determines whether a domestic import-competing industry has suffered material injury or the threat of material injury as a result of the subsidized imports. If the International Trade Commission rules in the affirmative, countervailing duties are assessed on the offending products.

There are legitimate reasons for opposing dumping and subsidies. However, improper use of antidumping and countervailing duty law also can be damaging to the country imposing it. Dumping and subsidies are, in and of themselves, beneficial to the importing country (and are costly to the exporting country), because the buyers of the product obtain their goods more cheaply (at the expense of the selling company or country). Subsidies and dumping are harmful to the importing country as a whole if the lower prices drive competitors out of existence (as in predatory pricing) or cause unnecessary adjustment costs to the domestic industry and labor (as in foreign business cycle dumping), and prices of products sold by foreign suppliers subsequently are raised above what they would have been.

The threat of ultimately higher prices, burdensome and unnecessary adjustment costs, and reduced competition is the fundamental reason for opposing dumping and subsidies. But the remedy for dumping also raises domestic prices by imposing duties. If abused, duties have the effect of reducing competition from foreigners in the domestic market as well as harming domestic buyers of the product through higher prices.

Thus care must be taken to ensure that misuse of antidumping and countervailing duty law does not make the cure worse than the disease. The interests of competition and the benefits to consumers and domestic producers, as well as the interests of the import-competing industry, all must be considered.

Because current law already offers adequate protection from harmful dumping and subsidies, changes to expand the use of antidumping duties would be protectionist. For example, in some cases dumping margins are extremely difficult to establish clearly, since the foreign country may not be selling the exported good in its home market, legitimate related costs of selling may be higher in the foreign market, and the costs of foreign production may be difficult to ascertain. Under current law, when a product's fair value is calculated, it is assumed that exporters must sell at a price high enough to provide an 8 percent profit margin, even though the before-tax average rate of profit on sales reported in 1986 for manufacturing, wholesale, and retail trade in the United States was less than 5 percent.

Trade bill proposals for antidumping and countervailing duties would move the law closer to a mechanism for granting protection independent of a legitimate threat to the domestic economy. One proposed change to U.S. antidumping and countervailing duty law would require antidumping cases against products which are not dumped themselves, but which incorporate inputs alleged to have been purchased by the manufacturer at a price below fair value. The amendment proposed in reaction to this newly defined "input dumping" is protectionist and GATT-illegal, and it makes the law less administrable because the foreign producer may not know if he is purchasing dumped inputs or what their fair value is supposed to be. The effect of the proposal is to expand the range of activities against which protection can be offered and encourage the initiation of cases.

Proposals to increase the likelihood of protection once a case is brought would alter the way dumping margins and subsidies are computed. One which would harm American subsidiaries of foreign firms would change the way indirect selling expenses are treated in determining foreign market value for transactions between related parties. The proposal would require that the administering authority not deduct "indirect selling expenses from the foreign market value in order to offset expenses deducted from an exporter's sale price." For example, firm XYZ-Europe produces a product at a cost of $100.

Its selling expenses in Europe are $20 and its profit margin is $5. The product, therefore, sells for $125 per unit. Firm XYZ-America, the subsidiary, sells the same product in the United States for $125 per unit. According to the new proposal, the product would have a dumping margin of 25 percent. The Department of Commerce would be required to deduct U.S. selling expenses and profit on sales as not part of the product cost. In America, the product cost would be $100, while in Europe the product cost would be $125. Thus would come a charge of dumping, whereas a proper calculation would find none.

Historically, the definition of subsidies has been based on quantifiables such as government provision of capital, loans or loan guarantees on better than commercial terms, provision of goods or services at preferential rates, forgiveness of debts, and contributions toward manufacturing expenses. In subsidy cases the Department of Commerce has uniformly held that generally available benefits, applicable to all companies and industries within an economy, are not countervailable subsidies. This position conforms with GATT interpretations.

The trade bill would define a subsidy to include actually conferred benefits which bestow a "competitive advantage" on a class of beneficiaries, regardless of the number of firms or industries receiving the advantage. Expanding the definition, of course, widens the class of actions which could be found countervailable. Applying such a definition to the United States, for example, one might ask whether national weather forecasts would be considered subsidies to agriculture, since the forecasts create greater competitive advantage for U.S. agricultural beneficiaries. The subjectivity of such a definition is dangerous in its possibilities for protectionist abuse and creates unfair uncertainty for trading partners about its application.

Section 301. Section 301 of the Trade Act of 1974, as amended, provides the President with extremely wide discretionary authority to act against the unfair trade practices of U.S. trade partners. This authority can be used to enforce the rights of the United States under a trade agreement, to respond to a foreign practice that has the effect of denying benefits to the United States under a trade agreement, or to eliminate any foreign practice that is unjustifiable, unreasonable, or discriminatory and which burdens or restricts U.S. commerce. "Unjustifiable" is usually taken to mean any act, policy, or practice in violation of, or inconsistent with, the international legal rights of the United States. "Unreasonable" is taken to mean unfair and inequitable, while "discriminatory" typically means acts, policies, or practices which deny national or most-favored-nation treatment to U.S. goods, services, or investments.

Under Section 301 the President can take all appropriate and feasible actions within his power to enforce U.S. rights to obtain the elimination of the objectionable act, policy, or practice. The response can be on a nondiscriminatory basis or solely against the guilty trade partner or party. It can be taken without regard to whether the goods or sector employed were involved in the act, policy, or practice identified as the original cause of the action. Among the responses, the President may suspend or withdraw benefits of trade agreement concessions or impose duties on goods or services as he deems appropriate. The President can act in response to petitions filed by private parties or on his own initiative. Investigations are administered by the Office of the U.S. Trade Representative in cooperation with other U.S. Government agencies. USTR negotiates with the foreign government, resolves the dispute if possible, and recommends actions to the President after interagency consultation.

The Section 301 statute has shown itself to be effective when used in a judicious and discerning manner. This Administration has been more vigorous in its active use of Section 301 than any other, increasing the yearly caseload by more than 50 percent and, for the first time, initiating at the President's request a number of cases such as the Japanese tobacco products case. But the mere act of instigating a Section 301 case does not magically ensure a solution to the problem at hand. While many Section 301 cases have been successful, others resulted in long and inconclusive negotiations, or only modest gains relative to the effort expended. In a sense, cases that end in retaliation or counterretaliation, as some have, represent failures of policy and diplomacy.

Because the Senate trade bill mandates mechanical retaliation against unjustifiable foreign trade practices without regard to whether retaliation is in the national economic interest, or without exercise of Presidential discretion, long-run gains to the United States could be sacrificed. More cases would be brought, but this would be less desirable than if the cases were brought on the basis of discretion.

The trade bill also requires retaliation against countries deemed deficient in their provision of intellectual property rights, and against countries which do not give reciprocal treatment in the telecommunications area. Since the United States has the most open telecommunications market in the world, virtually every country could be covered, even countries which in segments of the market are as free as the United States was only some 10 or 15 years ago before the breakup of the national telephone system.

Schemes for Deficit Reduction by Threats of Trade Sanctions. The trade bill would require retaliation against countries which are found to have "excessive and unwarranted" trade surpluses with the United

States. The term "excessive" is defined according to a formula, and "unwarranted" means that USTR has found the country to have a pattern of unfair trade practices that have an adverse effect on U.S. commerce and contribute to the trade surplus of the country. The provision would allow 6 months to reach an agreement to improve the bilateral trade balance by 10 percent annually, or retaliation is mandated. It does not specify what would be done to reinstate free trade and reduce international tension after the United States has branded one of its trading partners as an "unfair trader" and imposed a retaliatory set of tariffs.

Apart from a misplaced faith in negotiations as the method for reducing the U.S. trade imbalance, belief that bilateral trade balances should be required to stay within some fixed range exhibits a certain amount of confusion over the nature of international trade. Consider the simplest possible example of three countries A, B, and C, each of which produces a single good a, b, and c. Each country can make use of only two of the goods: country A trades some of its a to B, using the revenues to buy c from C; B trades some of its b to C, using the revenues to buy a from A; and similarly for country C. Each country has balanced trade, although no pair of countries has bilaterally balanced trade. Forcing bilateral balance not only would severely restrict trade, but in this case it also would shut down trade altogether.

Situations similar to this example are not difficult to find. For example, in 1986 the United States had a trade surplus with respect to Australia (primarily selling machinery and transport equipment), Australia had a trade surplus with Japan (selling primarily food and raw materials), and Japan had a trade surplus with the United States (selling primarily motor vehicles and sound and image reproduction equipment). Although the stylized example is simplistic, it shows how simplistic it is to believe that trade sanctions should be used to keep bilateral trade balances within a mathematical norm. Retaliations also would damage U.S. international relations. Finally, limitations on bilateral trade balances may not be in U.S. interests in the 1990s when America may need trade surpluses to pay back some of its borrowing of the 1980s.

The Climate for Protection and Removal of Presidential Discretion. The House bill would transfer the President's authority under Sections 201 and 301 (as well as under other sections not discussed here, such as Sections 337 and 406) to USTR, and both the House and Senate bills would transfer to USTR the President's authority to determine whether foreign government practices are unfair under Section 301. In combination with the mandating of Section 301 cases, these transfers of authority would represent a major change in the operation of U.S. law.

Since protection benefits the few at the expense of the many, the President, who speaks for the Nation, usually has been less willing to institute protection than those who speak for selected interests. By design, the executive branch as a whole is also broader in its perspective than its component agencies. The Departments of Agriculture, Commerce, and Labor, for example, have missions to speak for important components of the population, just as members of the Congress represent different regions. The President, however, can take the entire country and economy into consideration, as well as foreign policy objectives, through the interagency process which advises the President from many sources.

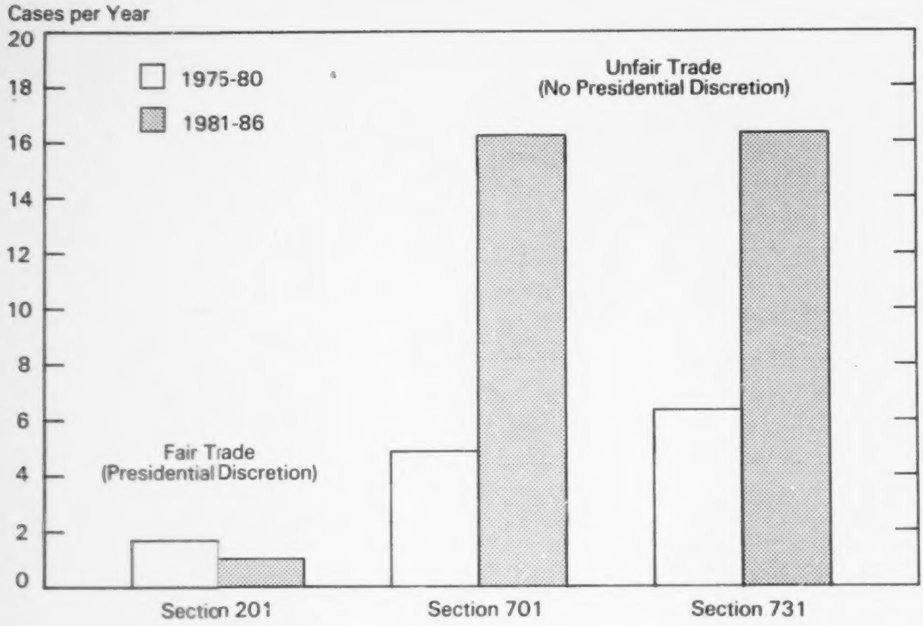
The need for advocating and balancing different interests within the American economic structure was recognized by the founding fathers. U.S. trade law similarly should seek to preserve necessary checks and balances. Thus Presidential discretion should not be removed in Section 201 and 301 cases, as has been suggested, since no single agency has as broad a perspective as the President.

The proposed procedural changes in U.S. trade law and removal of the President from his traditional role in the process are a sad, but perhaps expected, consequence of the growing demand for protection in the United States. Chart 4-4 compares the amount of protection granted in the United States under Section 201, dealing with fair trade where the President has discretion, and interventions under Sections 701 and 731, dealing with unfair trade where he does not, in the periods 1975 to 1980 and 1981 to 1986. As shown, protection granted under Section 201 changed little, but the number of petitions resulting in interventions under Section 701 increased 335 percent, and the number resulting in interventions under Section 731 increased 258 percent. It is difficult to believe that the frequency of foreign subsidies during this Administration are more than three and one-third times what they were previously, or that dumping has risen to more than two and one-half times its previous level (especially since the strong dollar during the latter period made selling to the United States easier for foreigners rather than harder). More likely, the higher intervention rate derives from changes made in U.S. trade law in 1979, the large trade deficit, and the consequent increased demand for protection inside this country.

The net effect of the definitional changes, the procedural changes, the loss of checks and balances, and the removal of Presidential discretion would be to further increase the amount of protection afforded domestic import-competing producers. Since passage of the Trade Act of 1974, the President has found that it was in the national economic interest to grant protection in response to 46 percent of the Section 201 U.S. International Trade Commission recommendations.

Chart 4-4

Trade Interventions



Source: Council of Economic Advisers, based on data from Office of U.S. Trade Representative.

Thus, in the absence of Presidential participation, protection under Section 201 could more than double if trade bill proposals became law. The figure would be substantially higher if curtailing the President's role also created an incentive for industries to file more cases. Mandating the initiation of cases under Section 301 would increase their number while reducing the success ratio. Enlargements of the definition of actionable practices and altered procedures for deciding cases would make Sections 701 and 731 affirmative findings and the subsequent market interventions easier.

The Pork Barrel. In addition to the procedural issues, there are many "pork barrel" amendments in the two trade bills. The Senate version of the trade bill contains a provision establishing a lamb import quota fashioned after the protectionist U.S. meat import law. This provision would place an upper bound on the amount of lamb that could enter the United States each year. Such a restriction is contrary to U.S. obligations under GATT. This trade barrier, like its sister meat import quota, would raise the cost of meat in the United States. Protection on meat is equivalent to voting a new tax on product users, and handing part of it over to domestic sellers. Part of the users' losses (in the form of higher prices paid) would go to domestic producers, but another part (resulting from the cessation of consumer purchases because of higher prices) would end up in no one's hands and thus be wasted.

The legislation also contains protectionist provisions for steel, adding additional products to those currently being protected by voluntary restraint agreements with foreign sellers, a form of quota. Users of wire fence panels, wire fabric, and reinforcing mesh would have to pay higher prices because of these imposed barriers to trade. Since another provision would include downstream steel products (those products incorporating steel components) in the quota of the country where the basic steel input was melted and poured, these products also would cost more to Americans. The bill also calls for the amount of U.S. coal purchased by Japan to be "taken into consideration" in any agreement with Japan regarding imports of steel. That is, U.S. willingness to buy Japanese steel would be linked to Japanese willingness to buy U.S. coal, thus distorting the market.

In addition to the above examples, the trade bills also contain provisions that would provide payments to special interest groups. One such provision is the proposed exception to the requirement that the tobacco program be operated at no net cost to the U.S. taxpayer for government-assisted exports. Pressure to use the public treasury to subsidize tobacco exports could increase Commodity Credit Corporation outlays by many millions of dollars.

Another handout is the sugar duty drawback provision. It is a usual practice in international trade for a firm that imports a product for domestic processing and then exports the good again to receive a refund or "drawback" of the duty paid upon reexport. The drawback normally is applied within a reasonably short period of time after actual import and reexport. The trade bill would extend the drawback period for sugar retroactively to allow drawbacks for exports as late as October 2, 1991, claimed against imports as early as October 30, 1977. This means that future exports (which need not have been imported themselves, and which may have nothing to do with earlier sugar which was not reexported because it was more profitable to sell domestically) would receive duty drawbacks. In effect, the law arranges to give money from the public treasury to refiners of sugar in the United States. Estimates place the transfer at more than $265 million, and possibly higher than $700 million. Because the U.S. Customs Service has not been able to verify potential claims, the loss to the treasury could be even higher.

CONCLUSION

In the area of trade policy, the United States today faces a choice. It can continue its commitment to foster an environment of trade liberalization, or it can turn to protectionism. The choice will be determined by how the Nation shapes domestic law and how it deals with its trade partners in the international forum, rather than by public statements of intentions.

U.S. negotiators have made substantial and historic progress this past year in forging agreements with other countries which free major international markets from trade restrictions. Pacts with Canada and Mexico, and U.S. participation in the ongoing Uruguay Round of GATT negotiations, offer real hope for the future of American trade relations. The U.S. GATT proposal for major reform of agricultural policies that distort international trade offers the prospect for progress in that important sector.

At the same time, spurred by its unwillingness to reduce Federal Government spending and the desire, nevertheless, to appear responsive to the large American trade deficit, many in the Congress appear ready to reconfigure U.S. trade law. Due regard for the macroeconomic and Federal deficit-related causes of the trade deficit suggests, however, that the proposed legislation is unlikely to have any substantive effect on the trade balance. A reasoned review of the various proposed trade provisions suggests that they are protectionist in nature, violate our international obligations under GATT, increase costs to consumers and business purchasers of imported inputs, and distort existing U.S. trade law. The recent textile and apparel legislation also would be damaging and costly.

Because protection favors some groups at the expense of the rest of the country, there always will be pressures from within the United States to provide greater protection. The same pressures exist abroad. But now, as bilateral and multilateral negotiations show signs of success, it is time to resist pressures for protection and international confrontation. The choice is between contraction or further liberalization. Contraction points down the road of economic stagnation, while liberalization will result in continued growth, strengthening the groundwork for international trade well into the 21st century.

CHAPTER 5

Knowledge, Markets, and Economic Progress

THE ECONOMY OF THE UNITED STATES has generated rising standards of living for most of its history. During this century, real output increased twelvefold, while population tripled, approximately quadrupling the goods and services available to the average American. Output per hour of work doubled in the first half of the century and has since doubled again. This enormous and sustained gain in productivity has led to rapid increases in living standards. Real per capita income rose at a 1.7 percent annual rate in the first half of the century and at a 2.0 percent annual rate in the postwar period.

Long-term economic progress is assessed not only by output and productivity, but also in terms of the means and choices that allow people to enjoy full, healthy, and satisfying lives. Gains in real per capita income improve well-being, as reflected in other indicators. The infant mortality rate in the United States declined from roughly 150 per thousand in 1900 to 11 per thousand in 1987. Life expectancy increased from 47 years in 1900 to 75 years for persons born in 1987. Retirement from work, a rare phenomenon a century ago and associated primarily with ill health, is now the norm, thanks to longer lifespans and higher incomes.

Steadily rising income and its broader benefits are not inevitable. In many societies throughout much of history, living standards rose only slowly and at times even declined. Indeed, the postwar period may be unique in terms of both the high overall rate of increase in real per capita income in the world and the widespread nature of the gains. In a world linked by trade, the benefits of economic progress are shared widely. Increased productivity and growth in one country enhance prospects for growth in other countries.

This chapter examines the factors that underlie increases in living standards over the long term and considers the role of government in supporting and sustaining the determinants of economic progress. Business cycle fluctuations aside, the output available for current consumption, or for investment to augment future consumption, is determined by (1) the quantity and quality of labor, capital, and natural resources; (2) the technology used in production processes; and

(3) the mechanisms that allocate inputs in production processes and distribute goods and services to final users. Government policies enhance the rise in living standards when they encourage increases in supplies of factors of production, support the advance and application of knowledge that increases productive efficiency, and improve allocative mechanisms.

In the United States, government policies have played an important positive role in supporting increased standards of living. Constitutional and common law traditions that protect individual rights and private property have provided the foundation for freedom and economic progress. Resulting improvements in well-being continue to attract those in search of better opportunities. Individual efforts to earn maximum returns in a competitive environment promote effective allocation of resources. Individuals have powerful incentives to increase supplies of productive resources, especially their own knowledge and skills (human capital), and to develop new products and technologies that promise economic rewards. In addition, government has supported public education, which has played a critical role in increasing the supply of human capital, and has financed basic research that contributes to economic advance but may generate little private reward. Recent actions in the United States to reduce high marginal tax rates and to remove burdensome regulations, both of which impair economic efficiency and diminish incentives for growth, have strengthened prospects for further improvements in living standards. These policies also have set an example for growth-oriented policies in other countries.

Expansion of the physical capital stock is a major contributor to economic progress and productivity. During the postwar years physical capital accounted for approximately one-third of output growth and 40 percent of growth in output per hour of work. Most measures of investment include only physical capital. It is estimated, however, that human capital accounts for three-quarters of the Nation's total stock of productive capital. Thus much investment is not identified as such in standard accounts of national income. Recognizing the importance of knowledge and effective resource allocation to economic progress, studies of the sources of growth have come to include contributions of human capital, technical innovations, and shifts in productive resources.

In the past in the United States, and still in some very poor countries, investments in human capital that led to better diets and improved health increased human capacity for physical labor. Today, the forms of human capital most important for progress are those that expand skill and knowledge. Investment in education, training, and work experience increases productivity and earnings. Individuals, families, and businesses gain directly, and society at large benefits indirectly. The widely shared benefits of investment in human capital, and problems in borrowing to finance it, suggest that government should encourage such investment. The strong incentives of individuals and families to invest in the most useful forms of human capital also suggest the value of individual choice and market allocation mechanisms. Investments in human capital, and the government's role in promoting them, are the main issues discussed in the first major section of this chapter.

Advances in scientific and technical knowledge and their application to the development of new products, services, and technologies are widely recognized as important for economic progress. Without definition and enforcement of property rights that allow discoverers of valuable new knowledge to reap at least part of the benefits, incentives for these socially valuable activities would be inadequate. Governmental support also is needed for advances in knowledge in areas that are public by their nature, such as national security. As with investment in human capital, economic incentives are critical in allocating resources to research and development. These are the main issues discussed in the second major section of this chapter.

Finally, one of the key advantages of a competitive market system is its ability to respond quickly and appropriately to the rapidly changing conditions that accompany high rates of economic progress. Interventions that slow necessary adjustments in a dynamic economy are impediments to economic growth. Governmentally imposed barriers and distortions that diminish incentives for work, investment, and innovation, or that divert resources from their most productive uses, are further barriers to progress. In particular, growth often requires reallocations of labor. Policies intended to reduce adjustment costs and protect existing jobs often can reduce employment and stifle growth. The harmful effects of such policies and the benefits of a more flexible, market-oriented approach to economic adjustment are the main subject of the third major section of this chapter.

HUMAN CAPITAL

The United States devoted roughly $500 billion in 1987 to gross investment in formal education. Another $100 billion was spent for worker training, not including informal efforts to improve skills and performance on the job. Investment in human capital is thus more than one-third larger than the approximately $440 billion spent last year for gross private nonresidential investment in physical capital.

Human capital investment has contributed substantially to the productive capacity of the labor force and the growth of the U.S. economy. Recent studies indicate that, in the postwar period, increases in human capital have contributed 10 to 20 percent of real output growth and a similar percentage of the gains in output per hour of work.

Over the last 40 years, the education and skill of the U.S. labor force has improved continuously but unevenly. An index of human capital, primarily representing schooling and work experience, developed by the Bureau of Labor Statistics (BLS), grew at an average rate of about 0.25 percent per year over the postwar period. During the mid-1970s, as many new workers entered the labor force, the average human capital per worker stopped increasing. In contrast, during the 1980s this index has grown by almost 0.5 percent per year.

INVESTMENTS IN EDUCATION, TRAINING, AND WORK EXPERIENCE

Aggregate rates of human capital investment are affected by population growth and the age distribution of the population. In the United States, both the population and the labor force have grown steadily. Better health and increased longevity have increased potential years of working life. Demographic changes, such as the aging of the baby-boom generation, and labor market trends, such as increased employment of women outside the home and earlier retirement, also have affected patterns of schooling, training, and work experience.

Education

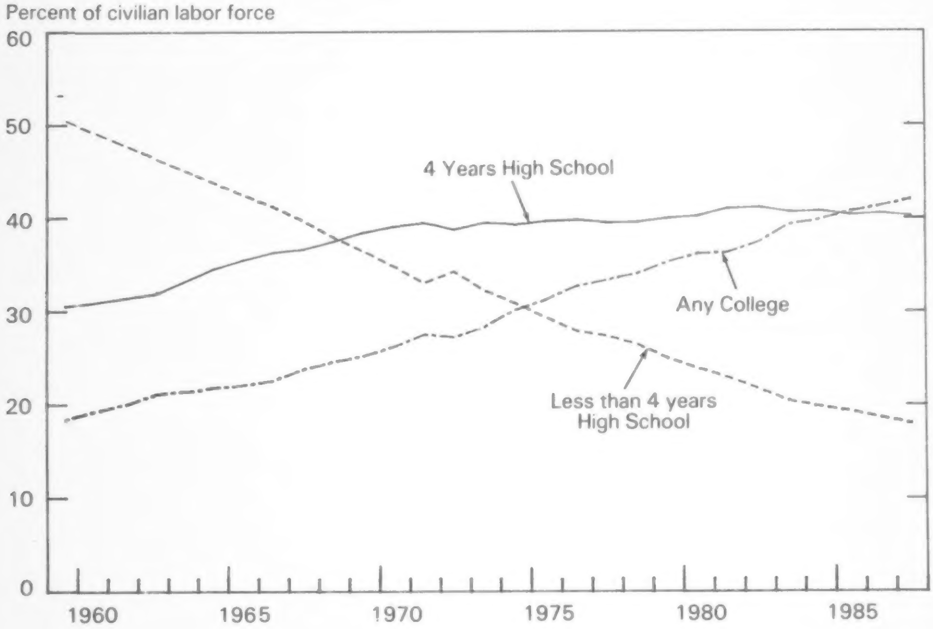
Direct annual expenditures for schooling, public and private, are currently about $310 billion. About 60 percent, or $185 billion, is spent on grade schools and high schools and the rest on post-secondary schooling, which includes vocational schools as well as colleges and universities. Expenditures for schooling have remained in the range of 6 to 7 percent of gross national product (GNP) for two decades, after having risen rapidly during the schooling of the baby-boom generation. The number of students has declined from a peak of almost 61 million in the mid-1970s to just under 58 million in the mid-1980s.

A large component of total investment in schooling at the higher levels, in addition to direct costs, is the forgone earnings of the students themselves. The time and effort devoted to study could otherwise be spent at work or leisure. The forgone earnings of students aged 16 and over are estimated to be about $200 billion per year, most of which is accounted for by post-secondary students. The share of total social costs of education attributable to the postponed earnings of students has increased in recent years, because a larger proportion of schooling is for post-secondary students with higher potential wages. In the early 1970s about 15 percent of the student population was enrolled in post-secondary schools, compared with 23 percent today.

Increases in years of schooling of the labor force are indicated in Chart 5-1. During the last 30 years the percent of the labor force not completing high school has fallen by more than half, while the percent having attended college has more than doubled. These trends have occurred primarily because retirees have had relatively little schooling. High school completion rates have been fairly stable for a decade at about 85 percent of persons 20 to 24 years old, and the proportion of persons 25 to 29 years old with 4 years or more of college has remained about 22 percent.

Chart 5-1

Years of Schooling of the Labor Force



Note.—Data are for March and relate to highest years of schooling attained.
Source: Department of Labor.

Data on hours of work by educational level and gender indicate that the amount of schooling has increased for both male and female workers, but more so for males. The BLS estimates that in 1948 two-thirds of the hours worked by men, and more than half the hours worked by women, were accounted for by those with fewer than 12 years of schooling. These proportions have declined to 17 percent for men and 13 percent for women. In 1948 only about 12 percent of total work hours were accounted for by those with more than 12 years of schooling, compared with more than 40 percent now. Currently, about 25 percent of work hours of men and 18 percent of work hours of women are performed by those with 16 or more years of schooling.

Years of schooling and expenditures are inputs to the process of acquiring human capital; they do not measure learning. A variety of measures have documented the decline in the academic achievement of American students at every level during the 1960s and 1970s, with evidence of partial reversal of this trend in the 1980s. Some of the decline of Scholastic Aptitude Test (SAT) scores in the 1960s can be attributed to the increasing proportion of high school students taking the test. But in the 1970s the proportion taking the test declined while scores continued to fall; now the proportion of students taking the SAT is rising again, and scores are rising.

Concerns about student achievement are due not only to evidence of academic declines, but also to indications that achievement has been low relative to perceived requirements for success in today's economy. Although basic literacy rates have increased steadily during this century, a number of surveys document low reading comprehension and other academic deficiencies among U.S. students compared with students in other countries. Young Americans score particularly poorly in science and mathematics. Yet evidence indicates that mastery of these subjects is useful in many occupations, not only in science and engineering.

Not all of the benefits of education are reflected in increased productivity and earnings. Education may contribute to a person's well-being in other ways as well. For many people, learning is enjoyable. Formal education contributes to continued learning. Education also provides information and skills that encourage fuller appreciation and enjoyment of science, art, and culture, as well as effective participation in public affairs. Schooling contributes to more efficient household management, to better health and nutrition, and to the higher educational achievement and earnings of one's children.

The clearest relationship between education and economic success is indicated by earnings patterns. Workers with more schooling consistently earn more. In 1986, for example, the median income of persons with only an elementary school education was about $9,000 per year, compared to high school graduates' median income of about $20,000. Persons with 4 or more years of college had median incomes of about $33,000.

As Table 5-1 indicates, after declining in the 1970s, the relative incomes of those with more education increased in the 1980s. During this decade, incomes of those with fewer than 4 years of high school have declined compared to high school graduates, while the relative incomes of college-trained workers have risen. Thus the returns to investments in schooling have increased. Gains have been especially pronounced for younger workers, who will continue to benefit from more schooling for many years.

TABLE 5-1.—*Relation of Income and Education, Selected Years, 1969–86*

[Index, income of high school graduates = 1.00]

Years	Males			Females		
	1-3 years high school	1-3 years college	4 years college[1]	1-3 years high school	1-3 years college	4 years college[1]
1969-71	0.89	1.16	1.39	0.84	1.17	1.44
1974-76	.87	1.09	1.28	.82	1.14	1.33
1979-81	.83	1.08	1.26	.82	1.14	1.30
1984-86	.81	1.12	1.37	.78	1.16	1.39

[1] Excludes those with more than 4 years of college.

Note.—Data are 3-year averages of indexes of median annual income for year-round, full-time workers, aged 25 and over.

Source: Department of Commerce, Bureau of the Census.

Changes in relative earnings are due to cyclical and demographic factors and to longer term economic changes. People with more schooling, for example, usually are more able to maintain employment and earnings during recessions. The relative earnings of college graduates declined during the 1970s as the highly schooled baby-boom generation entered the labor market, but they rose recently as this group gained experience in the 1980s. Over the longer term, increased demand for technical and managerial skills may be expected to raise the future relative earnings of workers with more education.

Earnings are higher for those with more years of schooling for reasons other than the productive value of education. Personal characteristics such as ability and effort, which contribute to success in both school and the workplace, account for some of the earnings differential. Higher earnings also are associated with factors such as parental income, gender, race, and geographic location. Research has confirmed, however, that schooling raises earnings even after accounting for the effects of these other measurable factors.

Estimated real private rates of return for investments in schooling in the United States have been 10 to 13 percent for secondary schooling and 8 to 10 percent for higher education during the 1970s and early 1980s. These estimates may be biased upward, because they cannot fully adjust for workers' ability and effort. Recent increases in relative earnings for more educated workers, however, suggest that estimates based on data from the mid-1980s would show even higher rates of return. Studies during the last 30 years consistently have shown that rates of return on investments in education have been comparable to those available on alternative long-term investments.

A number of studies have shown that schooling increases earnings for managers and the self-employed, as well as for employees, and have suggested that the benefits of schooling are greater in more dynamic economic environments. More schooling for farmers, for example, increases the payoff from agricultural research, increases the rate of adoption of innovative technology, and reduces the lag between price changes and appropriate market responses. Returns to schooling are higher in industries with more technical progress and productivity growth.

Workers with more schooling not only have higher earnings but also safer, more comfortable working conditions and lower rates of unemployment. The unemployment rate for workers with fewer than 4 years of high school is double that for workers with 4 years of high school. Workers with a college education had unemployment rates of less than 4 percent throughout the last 15 years, and they experienced smaller cyclical swings in unemployment than those with less schooling. But increased schooling of the labor force has not resulted in lower overall unemployment rates; unemployment rates of all schooling groups have risen over the last 20 years (Chapter 2).

Training and Experience

The human capital that workers accumulate while employed includes formal training and learning-by-doing. Post-school training is pervasive in the United States. About 40 percent of workers report having taken training to improve their job skills. Workers with more years of schooling also acquire more training on the job.

While much on-the-job training is of general value, some has value only in a specific firm. The worker bears the cost of general training, usually in the form of lower wages, because its value will be fully reflected in wage growth, whether the worker stays at the current firm or goes to another. The cost of firm-specific human capital investment is borne jointly by the worker and the firm, and the benefits of future productivity improvements are shared. Thus firm-specific investments encourage both the worker and the firm to maintain the employment relationship. Conversely, when job tenure is expected to be long, both the worker and the firm have more incentive to invest jointly in training.

The investment in formal, employer-sponsored training has been estimated to be about $60 billion per year and has been rising. About half this total reflects the wages and forgone output of employees receiving training. The $60 billion does not include the value of reduced wages that workers accept for jobs that offer training, nor does it include the informal, everyday activities of workers and firms to improve productivity.

In addition to schooling and training, the work experience of the labor force is an important source of productive human capital. Unpublished estimates by the BLS indicate an increase in the approximate years of work experience for private business workers from 17.4 years in 1950 to 18.1 years in 1964. Since 1964 average experience has fallen by more than 15 percent to 15.3 years in the mid-1980s. For men, average work experience has fallen by about 10 percent since peaking in the late 1950s, and it has held steady at about 17.6 years in the 1980s. The average work experience of women rose by about 15 percent between 1950 and 1965, to 13.2 years. In the late 1960s and the 1970s, many young women entered the labor force, and average experience fell back to about 11.6 years, where it has remained since about 1980.

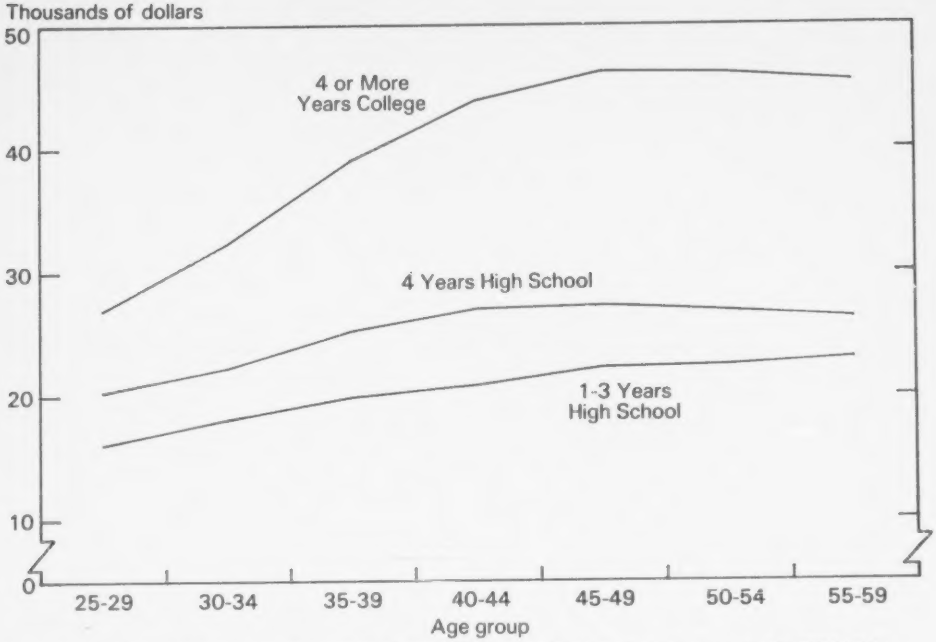
Four major demographic and labor market factors have contributed to these changes in work experience. First, more years in school have meant that workers enter the labor force at a later age. Second, with the labor market entry of the baby-boom generation during the 1970s, the age distribution of the labor force has shifted dramatically toward younger workers. Third, men are leaving the labor force at earlier ages than in the past. In 1948 about half the men 65 and over and 90 percent of those 55 to 64 were in the labor force. In the 1980s less than 20 percent of men 65 and over and about 70 percent of those 55 to 64 are labor force participants. Fourth, the share of women in the labor force has risen from less than 30 percent in 1948 to 45 percent today, and women generally have had less work experience than men.

Wages tend to rise with age through most of work life. Chart 5–2 shows that older workers have higher earnings and also that earnings rise faster and peak later for those with more schooling. This increase in wages over work life has become more pronounced during the 1980s. Younger workers are paid less, because they devote more time and effort to on-the-job learning. Their wages also rise as training and experience increase productivity. Some of the wage gains associated with experience are due to workers' finding employment that better matches their skills and interests. Younger workers change jobs frequently while they learn about the labor market, occupations, and particular jobs, and while employers learn about the capabilities of particular workers. Job or occupation change is part of a search process, and when a better job match is found, earnings and profits improve.

Work experience and training of the U.S. labor force will rise for the next two decades as a result of the large group of workers now

Chart 5-2

Earnings by Age and Education



Note.—Data are mean annual earnings of male year-round full-time workers, average for 1984-85 in 1985 dollars.

Source: Department of Commerce.

gaining experience and the smaller group of young workers entering the labor market. These demographic factors should contribute to reduced unemployment and improved productivity growth.

RATIONALES FOR GOVERNMENT SUPPORT

Human capital investment contributes to the well-being of individuals and to the long-term performance of the economy. But economic returns alone do not imply that the government should regulate or subsidize investment. Government involvement in human capital formation is predicated on three premises. First, there are major social benefits to increased levels of education that are not fully realized in the returns to individuals. Second, government support of human capital investment widens economic opportunity. Third, there are particular difficulties in private financing of investment in schooling.

Social, political, and economic interaction is facilitated by a common language, basic skills, and shared knowledge. A broad base of educated individuals allows for a more efficient economy and a more viable democratic system. The effectiveness of the military, moreover, is enhanced by a higher level of general knowledge and skills in the population, especially as national security relies increasingly on complex technology. These broad societal benefits of education provide one rationale for government funding and regulation of primary and secondary schooling.

Giving every child the opportunity for an education is considered necessary for a democratic society. Human capital contributes to individual earnings, and public support for schooling has been used to widen economic opportunities. Government support for human capital investment is also one way to help reduce dependence on other transfer programs. Most Federal funds devoted to education and public training programs are directed toward people with low incomes.

Private financing of human capital investment is relatively difficult, because most such investments are made by the young, and human capital itself cannot serve as collateral. For other investment opportunities, one can usually borrow funds by demonstrating profitability and pledging the investment itself as collateral, but for investments in schooling it is difficult for a lender to enforce repayment. Thus schooling generally is financed by the assets or income of parents or other family members. Parents commonly borrow to finance investments in their children's human capital. Adult students use their own resources, and if continued employment is assured, they may be able to obtain assistance from their employers. For individuals with insufficient access to private resources, there may be grounds for public support to help secure financing for education.

Public support for worker training generally is not provided, because training is funded jointly by the worker receiving lower wages and by the firm paying direct costs and allowing work time to be used for learning. Workers and firms realize the rewards from investments in job training through increased future wages and productivity.

POLICY ISSUES

Public policy affects all human capital investment, directly through government spending or indirectly through taxation and regulation. Education is the third largest object of government spending, after national defense and social security. State and local governments provide most of the public spending for education. The Federal Government pays about 6 percent of the approximately $185 billion annual direct cost of primary and secondary education, and about 12 percent of the approximately $125 billion in direct costs for higher education. Federal spending for training programs is about $5 billion. The Federal Government also provides training for its own employees, spending close to $20 billion each year for military training alone.

Government operation of schools is not a necessary consequence of government support of education. At the primary and secondary levels, State and local governments both fund and manage school systems. In post-secondary education almost all Federal support is provided to the student directly, allowing choice among public and private institutions. State government support of higher education also allows wider individual choice than at the lower levels.

Primary and Secondary Education

Poor achievement levels in primary and secondary schools have neither obvious causes nor simple remedies. Schools and teachers differ in their effectiveness, but there is no consensus on the underlying reasons. Low quality of teachers, low spending on teachers relative to school administration, curricula that fail to stress basic academic subjects, inadequate school discipline, poor early childhood preparation, and home environments that fail to encourage learning are among the suggested explanations.

Increased spending has not been effective in improving student performance. Public school expenditures per student rose steadily and most rapidly as student achievement was declining. In the early 1980s real spending per student was more than double that in 1960. Student-teacher ratios have fallen and the education and experience of teachers have increased, but none of these changes has been linked statistically with better student performance.

State and local school districts have introduced a number of reforms to promote quality. Some school systems have required students to meet minimum standards, and some have rewarded teachers for gains in student achievement. Many States have instituted statewide testing for high school graduation, and some withhold funds or exercise other sanctions when local school districts have poor records of academic progress. Several States are using alternative certification to attract new teachers who are proficient in their subject but lack the required coursework in teacher education. Such flexible certification gives school systems wider latitude in hiring teachers and removes barriers that prevent skilled people from entering teaching.

A dominant role for State and local governments is consistent with principles of federalism. Traditionally, Federal spending for primary and secondary schooling has been quite limited and directed toward the disadvantaged. Close to $4 billion per year is provided to State and local school districts to serve low-income students. Other major Federal programs support vocational, bilingual, and special education.

The Federal Government also supports research and the dissemination of information on student achievement in order to encourage choice and accountability in the Nation's schools. The ability of families to choose the schools their children attend is a critical factor in improving the quality of education. This Administration has proposed legislation and supported reforms that would encourage wider opportunities for parental choice and greater accountability in education assistance programs. More scope for choice would provide incentives for schools to improve. In school systems that are accountable for the quality of education, special programs and good reputations attract students. Schools that perform poorly face declining enrollments and reduced budgets. Magnet schools provide an alternative that incorporates parental choice, allowing parents and students to select among particular schools in a public school district.

One direct way for government to encourage schools to respond to demand for better education would be to provide financial support directly to families through vouchers. Families could use the vouchers at any school that meets basic standards. Voucher-type programs currently are used in Federal food and housing assistance programs, medicare, and in higher education. The GI Bill, which is an example of a successful Federal educational voucher program, has helped many veterans complete schooling, receive vocational training, and increase their earnings capacities. Competition among schools for students and support provides market incentives lacking in the current system of government-operated schools. Even partial voucher systems allowing choice among public schools would offer substantially increased competition and accountability, thereby promoting educational achievement.

Post-Secondary Education

Many U.S. institutions of higher education are operated by State and local governments. These institutions provide subsidies to local residents and others in the form of low tuition. Private operation and funding, however, play a much larger role than in primary and secondary schooling. Private schools account for close to one-third of total college and university expenditures, and proprietary schools are a major source of formal occupational education. State systems allow a large degree of student choice. Thus the higher education system in the United States, in contrast to primary and secondary education, has allowed students and their families some choice among institutions, thereby encouraging higher quality. One measure of the success of this approach is the large and growing number of students from other nations that choose to study in this country.

Consistent with the policy emphasis on choice and accountability, the major Federal programs in post-secondary education provide aid directly to students. In the last decade the number of student aid grants has increased by more than 65 percent. The largest Federal expenditure for support of post-secondary education is in the form of grants to low-income students. Close to $4 billion in such grants was provided in 1987. The Guaranteed Student Loan Program makes funds available by providing government guarantees to banks and other private lending sources. More than $9 billion annually is borrowed under this program. Students are responsible for repayment of principal and interest (after the period of schooling), but the Federal Government guarantees repayment if students fail to meet their obligations. These loans carry interest rates far below those that would be required without Federal backing. Other aid in the form of loans, work-study programs, and grants is provided to students through the educational institutions themselves.

Student loan defaults cost about $1.5 billion in 1987. A large proportion of defaults are concentrated at relatively few schools. Student loan default rates exceed 50 percent at more than 500 schools, which make up about 7 percent of the post-secondary institutions that participate in loan programs. By more strongly encouraging the repayment of loans, the Federal Government can increase the amount available for investment in education. Sanctions now are applied to students, but incentives for schools to provide better monitoring and better education also should help encourage loan repayment.

Worker Training

Workers and firms invest in job training and retraining to obtain the future private returns that result from increased productivity. Many government policies influence investments in job training and experience. Direct government support of training programs is intended to raise the earnings capacity of the disadvantaged and to ease the adjustment of displaced workers to new jobs. During the last 25 years the Federal Government has spent more than $115 billion on training and related programs, including classroom training, training on the job, and job search assistance, but there is no consensus that these training programs have significantly increased the earnings of participants. Past evaluations have been inconclusive, partly because of methodological problems. Evidence suggests that training for the disadvantaged has improved the earnings of adult women, but it has had little, and perhaps even adverse, effect on the earnings of youths and adult males. This Administration has encouraged recent efforts to develop more effective training programs with designs that facilitate better evaluation.

Education in Science and Engineering

Private and social returns to education and training are affected not only by the years of schooling but also by the student's field of study. Undergraduate specialization in engineering, for example, generally leads to high earnings. Because they can command high starting salaries, engineers are less likely to postpone labor market entry and forgo current earnings in order to pursue post-baccalaureate education. As a result, most Americans with the requisite abilities and interest do not pursue masters or doctoral training. Post-baccalaureate study in the sciences and engineering, however, is vital for research and innovation. A major factor in maintaining the high level of research and development (R&D) activity in the United States is the attraction of U.S. graduate programs for students and scientists from abroad, about half of whom remain to pursue careers in this country. Foreign students comprise a growing proportion of full-time graduate students in science and engineering, having risen from 17 percent of the total in 1977 to 27 percent in 1986.

Most people who complete doctoral degrees in science and engineering pursue careers in research, for which much of the funding is provided by the Federal Government. This close link has encouraged Federal support for graduate studies and post-doctoral training in the sciences. The Federal Government provides fellowships and part-time employment for graduate students in federally funded research projects carried out under the supervision of faculty or other senior researchers. Some of the Federal support for post-baccalaureate training is similar to the joint funding of specific on-the-job training by firms and workers in the private sector. Since the Federal Government is a large consumer of R&D, it captures some of the benefits from training through a larger supply of scientists and engineers. Furthermore, R&D carried out in the private sector may have benefits that extend broadly through society.

SCIENCE AND INNOVATION

Research and development leads to scientific discoveries and new technologies that enhance economic progress. In the United States private and public expenditures for formal R&D have reached more than $120 billion per year. The contribution of this investment to the productivity of the economy and the quality of life is large and pervasive.

Research and development usually is divided into three categories: basic research, which investigates scientific questions with no readily foreseeable applications; applied research, which is intended for application; and development, which aims to produce particular products or processes. Formal investments in knowledge are described largely in these terms, but the distinctions are somewhat arbitrary. Solving problems of development can shed light on basic scientific problems, and some firms undertake basic research in hopes of eventual commercial applications. In addition, many informal R&D efforts are not measured as R&D.

Technological progress, which is at least partly a result of formal and informal R&D investments, has led to higher incomes, better working conditions, and a greater variety and abundance of products. Standard productivity measures, however, cannot capture many of the most visible improvements made possible by advances in science and technology. Much publicly supported R&D, for example, is devoted to public goods such as national defense and public health, the benefits of which are not measured as increased productivity. Even R&D that helps create better products and more efficient production processes provides benefits that are not easily measured, such as improvements in computers and calculators.

EXPENDITURES AND RETURNS

U.S. expenditures for R&D have increased considerably in real terms since World War II, as shown in Chart 5-3. Expenditures grew at about 9 percent per year from 1941 to 1967, when they abruptly leveled off. Since 1977, expenditures have been rising again with rapid growth of defense R&D, growth of privately sponsored industrial research, and restoration of government support for basic research. For the last 10 years, total real R&D expenditures have been growing at a rate of approximately 5 percent per year.

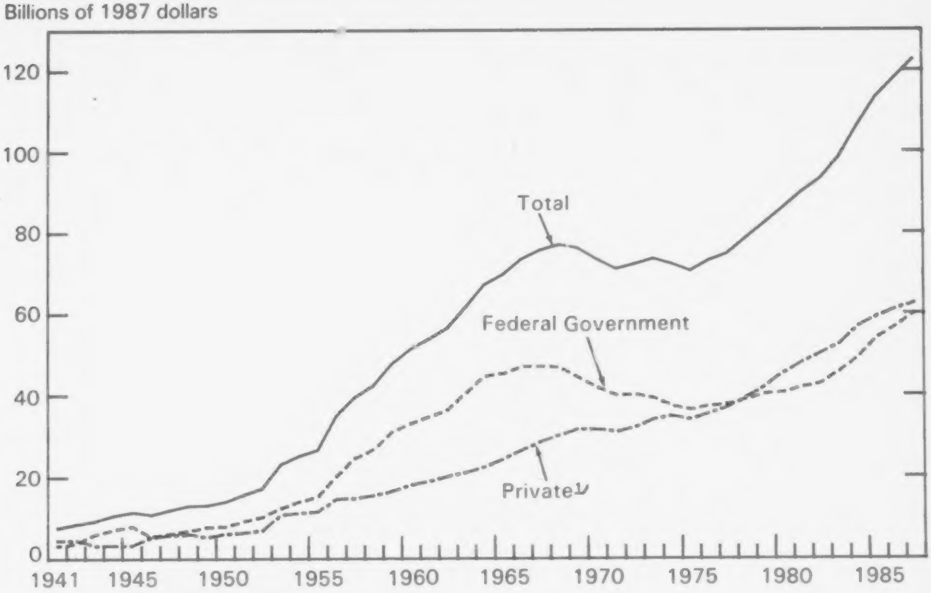
Private Investment

In 1987 approximately half of total national R&D expenditures were funded by private sources, up from about one-third in 1965. For the last 15 years private sources have provided more than two-thirds of U.S. expenditures on industrially performed R&D. About three-quarters of funding for nondefense R&D is provided by private sources, and about 20 percent of funding for basic research is private. The emergence of the private sector as a major provider of R&D funding is one of the most important developments in science and technology in the last two decades.

Private R&D has a strong relationship to economic growth. According to one study, from 1948 to 1985 private R&D investment accounted for an estimated 7 percent of growth in output per hour of work and about 13 percent of growth in productivity in the nonfarm business sector. Estimates of rates of return to private R&D vary considerably, but are consistently high. Privately funded basic research

Chart 5-3

Research and Development Expenditures



1/ Private includes a small amount of State and local government funds.

Note.—GNP implicit price deflator used to deflate expenditures.

Sources: Department of Defense (1941-52) and National Science Foundation (1953-87).

has particularly strong effects on productivity growth, in part because its results raise the overall level of technology in an industry.

The gains to society from private R&D that are not captured by the firm performing it are significant. Knowledge produced by private R&D spreads first to technologically related firms and then throughout the economy. Patent studies reveal that firms whose technological neighbors invest relatively large amounts in R&D produce more patents per dollar of their own R&D and have higher rates of productivity growth than do firms in less research-intensive environments. Firms cannot simply adopt research, however; they generally must do a certain amount of research themselves to be able to take advantage of knowledge that other firms produce.

The extensive spillover benefits from private R&D are also apparent in the fact that firms often imitate the innovations of their rivals. One study found that 60 percent of patented inventions had been imitated within 4 years. The fast depreciation of patent values confirms that knowledge created by research and innovation spreads quickly and can be appropriated by other firms.

Federal Support

Federal spending for R&D was about $60 billion in 1987, almost half of the national total. In addition, a special tax credit is intended to encourage private investment in research. Defense R&D has increased from 51 percent of Federal R&D spending in 1977 to 69 percent today. From 1980 to 1987 Federal spending for basic research (defense and nondefense) increased by about 25 percent in real terms to $9.7 billion. During the same period nondefense basic research grew from 28 to 46 percent of Federal nondefense R&D.

From the late 1940s to the mid-1960s, federally sponsored R&D advanced mainly defense and space technology. From 1967 to 1977 overall Federal funding for R&D slowed, but larger amounts were devoted to health and applied research, especially in the social and environmental sciences. Applied energy research and demonstration projects, heavily funded in the 1970s, have been curtailed in recent years as unproductive and inappropriate objects of Federal support. Recent concerns about international competitiveness, health, and national defense have prompted a surge in Federal support of basic and defense research.

Returns to federally sponsored research are sometimes dramatic and easy to see. Federal investment in satellite technology, for example, revolutionized the communications industry. Federal expenditures on defense and medical research help prevent war and improve health, but these results, by contrast, are more difficult to quantify. The results of basic research diffuse gradually into industries and lead to increased innovation. One study of commercial innovations in chemistry has found that university research, which was largely federally funded, accounted for a large proportion of footnotes in the scientific articles that announced the innovations.

The most direct measurement of returns to Federal R&D tries to discern its effect on productivity, taking R&D (along with labor and capital) to be an input, and production of goods and services to be the output. Such studies have not shown a strong relationship between industrial productivity and Federal R&D. One study has found a rate of return of only 1.5 percent to Federal R&D, compared to returns to private R&D of between 9.2 and 33.4 percent. These meager results have been questioned as a measure of the contribution to overall well-being, however, because most Federal R&D is directed toward public goods that do not generate significant private returns. In some areas, such as agriculture and health, returns to Federal R&D appear to be robust. If public expenditures stimulate private R&D, moreover, a portion of the high returns to private R&D could be attributable to complementary Federal research. Studies of whether Federal R&D increases private R&D have yielded conflicting results.

Case studies of Federal R&D also have attempted to measure returns to investment. Some have shown high returns to particular Federal R&D investments, but these results cannot be generalized. It is difficult to assign R&D inputs, especially in basic research, to the appropriate outputs. Furthermore, researchers tend to study successful R&D projects and may fail to account adequately for the costs of unsuccessful efforts.

International Comparisons

Because of intense competition in international markets, the level of U.S. investment in R&D has been questioned. The United States invests far more in R&D than any other country in the free world, spending more than two and one-half times as much as Japan, the next largest investor. The United States, Japan, West Germany, France, and the United Kingdom all devote about 2.5 percent of GNP to R&D. If defense R&D is excluded, Japan's and West Germany's outlays relative to GNP are higher than those of the United States by nearly 1 percentage point. The United States leads Japan and West Germany, however, in the ratio of nondefense R&D expenditures to manufacturing sales. The U.S.S.R. reportedly devotes the largest share of GNP to R&D. The productivity effects of this spending, much of which is probably military, appear mixed.

In part because of its large investments, the United States sells much more in R&D outputs, such as patent licenses, plans, and blueprints, than it buys. The balance of U.S. receipts minus payments for royalties and fees has grown 3.4 percent annually in real terms from 1961 until 1986, reaching almost $1.7 billion in 1986. Relatively large amounts of technological knowledge enter the United States in the form of improved products, and large amounts diffuse out in the form of licensed technology. Another indication that scientific knowledge is an important U.S. export is the large role American universities play in training scientists and engineers from other countries.

The United States has led the worldwide advance in science and technology for many years, but the size of the U.S. lead has diminished. The number of patent applications made abroad by U.S. citizens, for example, fell by about half between 1969 and 1982, while Japanese external patent applications grew by almost 55 percent. The U.S. real trade balance in high-technology products, often used as an indicator of competitiveness, fell by $41 billion (1987 dollars) between its peak in 1980 and 1986. This decline, however, coincided with a large increase in the value of the dollar and a decline in all other trade sectors.

The term "competitiveness" suggests to some that growth in one country disadvantages others. In fact, the United States gains from scientific and technological progress made by other countries. That penicillin was discovered in England and relativity in Switzerland does not diminish their contributions to U.S. health and scientific understanding. Advances in science and technology, which diffuse into and out of the United States and every other country, would be deterred by the closing of national borders to the transfer of knowledge.

The decrease in the the U.S. lead in science and technology has prompted some to call for increased government support for R&D. It is not clear, however, that U.S. firms invest too little in R&D or that their returns are not competitive. One recent study has suggested that applied R&D yields a higher return to Japanese firms, which in some industries may be better than U.S. firms in transforming externally produced technologies into marketable applications. Both the levels and overall returns to R&D investment in the United States, however, compare favorably to those in Japan. Another study of American and Japanese manufacturing firms found that Japanese firms spend about the same amounts on research relative to sales as U.S. firms, and they appear to gain similar returns.

ROLE OF GOVERNMENT

Because returns to investments in knowledge are difficult to measure, government research policy has no straightforward guide. Private firms must estimate the appropriate levels of R&D under conditions of greater uncertainty than is common for other kinds of investment. Private firms, however, unlike governments, both bear the costs and realize the gains from their investments in knowledge. The costs of government research, by contrast, are borne by taxpayers, while the benefits accrue to the public at large or to particular industries or firms. Private firms have incentives to invest the amount that produces the greatest net return, but governments do not face similar incentives or constraints. Thus governments usually can encourage R&D most efficiently by defining and enforcing property rights so that private researchers and their sponsors can undertake such activities profitably.

Providing incentives for R&D often involves extending the application of property rights in new ways. The definition of property rights in the use of satellites and their orbits, for example, has advanced telecommunications substantially. The definition of new property rights creates incentives for continued technological advancement that leads, in turn, to the more productive use of resources.

Defining property rights to research in a way that creates incentives for private firms to sponsor it is sometimes difficult or impossible. Purely basic research, for example, creates new knowledge that spreads into the world at large, improving life in unpredictable ways. Experience suggests that payoffs from basic research can be very high, even if they cannot be fully anticipated. The basic research that unraveled the molecular structure of DNA (deoxyribonucleic acid), for example, led to the birth of a new industry—genetic engineering. Individuals and firms that sponsor research can expect to capture only a fraction of the total yield it produces. One study estimates that the social returns of industrial innovations are about double the private returns. Firms tend to invest only where their gains are expected to cover costs. Thus, for basic research that produces unpatentable but potentially valuable new knowledge, an absence of public support would leave social benefits unexploited. The appropriate amount of basic research, the desirable level of public support, and the best allocation of resources among competing research opportunities are difficult to determine. Policymakers must estimate the prudent level of investment without exact quantitative evidence of rates of return, weighing the costs of diverting resources from productive private uses.

Firms sometimes may capture significant returns from research even without well-defined rights to innovations, if the research is applied to a product or service for which they represent a large share of the market. A very large computer firm, for example, may find it profitable to invest in relatively basic research on superconductivity, because it may hope to create highly profitable new products on the basis of resulting innovations.

If no single firm has a large enough share of the industry to fund research profitably, users of that research may form organizations to sponsor it. Private cooperative research efforts in the computer industry and voluntary organizations of farmers that fund research on plant disease are examples.

For potential innovations with many beneficiaries, however, the costs of organizing and operating a voluntary organization may be high, and access to the innovation by nonparticipants may be almost impossible to preclude. Compulsory funding through specific taxes or, if benefits are broad and indirect, through general funding is then sometimes used. Government funding of relatively basic, agricultural and health research often is justified in these terms.

Public goods that require large research inputs present a much clearer case for government support. Projects such as the superconducting super collider, if they are to be carried out at all, must be supported by government. National defense and protection from contagious diseases depend on specialized research for which private individuals do not have adequate incentives. About 80 percent of federally funded R&D is devoted to defense or basic research.

INTELLECTUAL PROPERTY RIGHTS

Investment in knowledge, like other investment, depends on rights to future returns. Even in research that is publicly supported, the incentives created by property rights have powerful effects.

Patent, licensing, trademark, copyright, and trade secrets laws are critical in determining the share of the returns from commercially valuable ideas and inventions to which an inventor or investor is entitled. The dramatic advance of commercial biotechnology since 1980, for example, was aided by the U.S. Supreme Court decision that microorganisms produced by genetic engineering were patentable. Building on the long-established principle that specially bred lines of plants and animals belong to their breeders, genetically engineered higher organisms, such as improved goats and cattle, now are protected by property rights. Legislation such as the Plant Variety Protection Act of 1970 and subsequent regulatory changes have made property rights in agricultural innovations easier to establish. As a result, research previously supported by government can be undertaken profitably by private firms, which now fund more than 60 percent of agricultural research.

This Administration has supported many actions that protect intellectual property, including stronger international enforcement of property rights, facilitation of joint ventures, and improved procedures for regulatory review. For example, incentives for pharmaceutical innovations have been strengthened by reducing the time for regulatory approval and extending patent life to make up for most of the time lost during government review.

International enforcement of intellectual property rights is increasingly important as national economies become more closely linked by trade and investment. U.S. firms encounter myriad problems in protecting their intellectual property abroad. Some countries offer only limited protection to process patents. Others do not recognize patents on pharmaceuticals and chemicals or copyrights on computer software. Most newly industrialized countries lack rules sufficiently flexible to offer protection to new technologies such as biotechnology and satellite communications.

This Administration strongly supports protection of intellectual property rights through the General Agreement on Tariffs and Trade, and it is working to end piracy that erodes incentives to innovate (Chapter 4). U.S. inventors have been defended against the importation of goods made abroad with unlicensed technology by vigorous enforcement of existing trade law. The Administration also supports changes in the law to strengthen intellectual property provisions. The United States has proposed that the Organization for Economic Cooperation and Development (OECD) work to establish a framework in which nations cooperatively support basic scientific research and training and enforce intellectual property rights.

Intellectual property rights, broadly conceived, include not only the right to exclude others from the use of one's knowledge, but also the right to share knowledge for productive purposes. Private firms may want to conduct joint research in order to realize economies of scope and scale. In the past, fear of inappropriate application of antitrust laws has inhibited cooperative research among competing firms. By defining antitrust liability more clearly, the National Cooperative Research Act of 1984 opened the way to research joint ventures which may make research profitable in areas where property rights are difficult to define or enforce. In the computer industry, for example, cooperative research already has yielded important innovations and marketable products. Fear of antitrust liability sometimes has prevented firms from broad licensing of intellectual property. This Administration supports legislation that would promote the dissemination of new technology by preventing the award of multiple antitrust damages in cases where patent licensing has no anticompetitive effect.

Federally sponsored research can benefit from the incentives created by property rights. The Patent Law Amendments of 1980 provided a uniform system for assigning title to inventions made at universities that conduct government-sponsored research. Between 1980 and 1986 cooperative ventures increased, and the number of patents issued to American academic institutions grew by 70 percent. Before these reforms, patenting such inventions was uncertain, and cooperative research ventures between private firms and universities were difficult to establish because of the complex regulations that accompanied Federal funding. The Technology Transfer Act of 1986 also should allow government scientists to respond better to market demands by simplifying the process by which Federal laboratories' discoveries may be patented and developed. For example, a Federal laboratory and a private biotechnology firm jointly are exploring vaccines against poultry disease.

INCENTIVES IN GOVERNMENT RESEARCH

The Federal Government does not have the appropriate information and incentives to determine the most useful outputs of R&D, except when the government is the principal user. For example, in areas of defense research such as aviation, computers, and semiconductors, the Federal Government was for many years not only the primary funder but also the primary user of the R&D product. Government thus had extensive knowledge of its needs and could guide research toward successful applications.

Federal support for R&D in health and agriculture often is mentioned as an example of government research that has produced large social benefits. Research in these fields illustrates the importance of close contact between the performers and users of R&D. The close association of most schools of agriculture and medicine with the decentralized farming and health care industries may allow scientists to have more contact with the ultimate users of R&D outputs when deciding how to allocate R&D resources than would be the case were research more centrally directed.

In contrast to research concerning public goods, the Federal Government's efforts to fund innovations in the private sector often have been unsuccessful. Government-sponsored energy research and research into building materials and low-cost housing design produced little that was ultimately marketable.

Support of synthetic fuels is perhaps the most notable example of inappropriate government-directed investment in recent years. Citing the dangers of dependence on imported oil, the previous Administration proposed spending $88 billion to speed the development of synthetic fuels. The Energy Security Act of 1980 established price supports, direct subsidies, tax credits, and loan guarantees to encourage participation in the program.

After the synfuel program began, higher world energy prices induced greater supplies and conservation. In 1981, after deregulation, oil prices declined. However, the synfuel policy was based on the assumption that oil prices would reach $40 to $70 per barrel. Weak energy prices and political controversy helped convince the Congress to reduce the Synthetic Fuels Corporation's funding substantially in 1984. With the fall of world oil prices, much of the Federal Government's support of windmills and other quixotic energy projects came to an end. The history of these energy initiatives suggests that government should not try to impose new technologies on an industry which is unwilling to commit its own resources to them, and that political influence can make policies that are obvious economic failures difficult to abandon.

MARKET FLEXIBILITY

Economic growth requires many adjustments, including the expansion of productive activities and the abandonment of those that prove unproductive. In a dynamic economy, markets for all productive factors—labor, capital, and natural resources—must accommodate shifting patterns of demand and changing technologies. As the economy grows, capital is assembled and used in new configurations, and industrial as well as occupational shifts take place in the labor force. The value of aggregate output is increased when factors of production shift to more highly valued uses in response to changes in demand and in costs of production. Many changes result from investments in human and other forms of capital and from new technology. The development of aircraft and computers, for example, has opened new opportunities for consumption, production, and employment.

Increased income per capita, as well as relative price changes, lead to shifts in demand patterns. Consumers with higher incomes demand a wider variety of products and more services relative to goods; they spend a smaller share of their income on the basic necessities of life. At the turn of the century, households spent more than 30 percent of disposable income on food, compared to about 15 percent today. Thus, choices available to consumers have increased as has discretionary spending for travel, recreation, and other services.

Changes in output, consumption, and technology are essential features of economic progress. Rigidities and distortions in markets can impede natural responses to economic change, reducing potential gains from investment and slowing productivity and income growth. Maintaining the flexibility of labor markets is particularly important for a healthy economy.

MARKET BARRIERS AND DISTORTIONS

Throughout the world there is increasing recognition that economic growth requires the reduction of structural barriers and distortions within domestic markets, as well as the reduction of protectionism in international trade. Constraints on capital and labor markets stand in the way of shifts in comparative advantage, barring allocation of resources to more productive uses. Taxation and regulation are major sources of market distortion, inhibiting activities that otherwise would expand or providing subsidies to activities that otherwise would be curtailed.

Taxation

In general, taxes are distortionary, because they interfere with the efficient allocation of productive resources and reduce incentives to work, save, and invest. These burdens can be limited by keeping marginal tax rates as low as possible and by imposing similar tax rates on similar products, resources, or activities.

The Tax Reform Act of 1986 moved the U.S. tax system substantially in the direction of lower and more equal marginal tax rates. As discussed in Chapter 2 of the 1987 *Report*, tax reform reduced the marginal Federal tax rate on labor income from 25.8 percent to an average 21.7 percent, and it has significantly lessened differences in tax rates on the income from alternative forms of investment. The higher after-tax yield of labor income encourages work and investments in human capital, which in turn increase the productivity of labor. More equal taxation of investments also encourages a more productive distribution of capital, because investors' decisions will be made on the basis of expected economic returns rather than tax consequences.

It is estimated that over the long term tax reform will increase real net national product by approximately 2 percent and raise aggregate consumption by roughly 4 percent. The net improvement in economic welfare is equivalent to about $50 billion per year.

Tax distortions, however, cannot be avoided entirely. Any practical system of taxation induces distortions, as discussed in Chapter 2 of the 1985 *Report*. Costs of resource misallocation have been estimated to range between 20 and 50 cents per additional tax dollar collected. The costs of private compliance with personal income taxes are estimated to add another 5 to 7 cents per dollar collected. Because government outlays must be financed by tax revenues—now or in the future—and because taxes have such sizable indirect costs, government spending should be undertaken only if the expected value of the activity is substantially higher than its outlay costs. Government services and transfer programs that fail to meet this test should be cut back.

Regulation

Although often intended to correct externalities and other market imperfections, government regulation frequently causes distortions that reduce allocative efficiency and impede growth. The regulation of financial services, for example, has reduced the efficiency of capital markets. While in force, Federal interest rate ceilings on bank deposits lowered the returns available to small savers and constrained the amount of credit that depository institutions could provide to businesses and homeowners. Similarly, interstate banking laws restrict the flow of funds to productive investments and interfere with diversification of risks, thus reducing the gains that would be available to both savers and borrowers in nationwide capital markets.

During the past 50 years, regulation of agriculture has posed significant obstacles to economic efficiency and adjustment. Agricultural regulation has restricted imports, subsidized production, raised prices, and kept land idle. Federal outlays and consumer costs of farm commodity programs are estimated to have been about $22 billion in 1987. Furthermore, the regulation of agriculture has slowed the movement of labor and capital to other industries. It has wasted resources by distorting investment within agriculture and by diverting investment from more profitable activities.

Rent controls, remaining controls on trucking, natural gas regulation, automobile fuel economy standards (discussed in Chapter 5 of the 1986 *Report*), import barriers such as voluntary agreements to restrict imports of automobiles, and some rules designed to control environmental risks (discussed in Chapter 6 of the 1987 *Report*) are all examples of regulations that reduce market flexibility. Price controls distort resource allocation. Regulation often reduces incentives for investment by insulating firms from competition, by creating hidden subsidies and uncertainty about future changes in rules, and by requiring adherence to rigid standards that preclude innovation and the introduction of lower cost methods of production. Safety and health regulations that require the installation of particular equipment, for example, may stifle incentives for developing better ways of improving workplace safety.

In recent years the United States has made substantial progress in deregulating oil prices as well as major industries such as airlines (Chapter 6), buses, and railroads. Deregulation of transportation industries has been associated with a resurgence of productivity growth (Chapter 2); one study has estimated savings for the economy of roughly $50 billion per year. Procedures also have been established for review of Federal regulations on a systematic basis to ensure that new regulations are worth their costs.

LABOR MARKET FLEXIBILITY

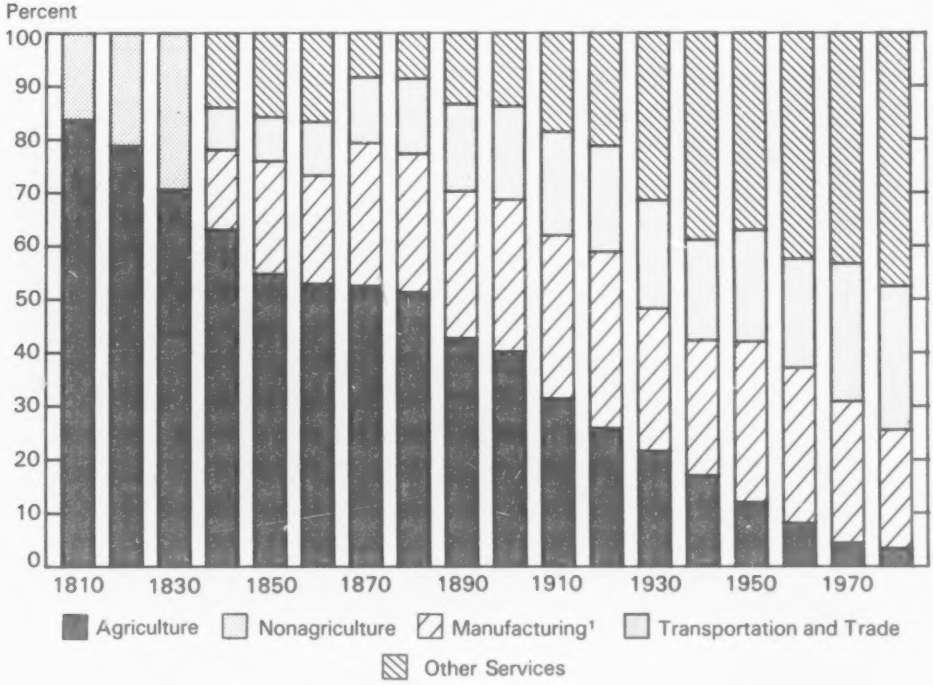
Flexibility in labor markets is particularly significant for allocative efficiency and growth, because labor is the dominant input to production. In the United States, labor has contributed about 70 percent to output for well over a hundred years. Compensation of employees now accounts for almost 75 percent of national income, up from about 55 percent at the turn of the century.

In addition to improving the allocation of productive resources, flexible labor markets expand employment opportunities and further contribute to growth by encouraging investment. Adaptable labor markets increase returns to investment, particularly in knowledge, by rewarding the acquisition of skills that are in demand and the adoption of cost-saving innovations in production.

As discussed in Chapter 2, U.S. labor markets have been remarkably successful in generating new jobs for a growing labor force and in accommodating structural change. Primarily as a result of strong growth in productivity, the share of the U.S. labor force devoted to agriculture fell from more than 80 percent in 1810 to about 3 percent today, as shown in Chart 5–4. The share of the labor force in manufacturing rose earlier in this century, but has declined in recent decades, also reflecting strong productivity growth. Shares in finance, government, and other services have increased. Employment has shifted toward jobs that are safer and less physically arduous, and that demand more human capital. Work fatality rates in service industries, for example, are less than one-sixth of those in agriculture. Employment in manual and farm occupations, which accounted for about three-fourths of U.S. jobs in 1900, fell to less than 40 percent in 1970, and the decline has continued.

Chart 5-4

Labor Force Shares by Industry



[1] Also includes fisheries, mining, and construction.

Sources: Department of Commerce and Department of Labor.

Contrary to popular notions, increased unemployment in the postwar years in the United States has not been associated with unusually rapid changes in industrial structure. Measures of the structure of employment by industry in the United States do not indicate greater turbulence or increasingly rapid shifts in employment, across either major or more narrowly defined industrial sectors. The level of unemployment accounted for by workers' changing industry has been steady since 1970.

Flexible labor markets facilitate change, but they do not preclude job attachment or long careers in a single firm. Long-term employment is common among American workers. About half stay with a single employer for 8 or more years, and almost 30 percent do so for at least 20 years.

Most changes in employment patterns take place as a result of employment growth and voluntary job change. Workers, particularly the young, change jobs as they find opportunities that better suit their skills and preferences. Evidence shows that the changing employment patterns of workers under 25 years of age account for much of the sectoral reallocation of jobs. In manufacturing, voluntary quit rates have ranged from about 15 to 25 percent of the work force in recent years, and layoffs typically have accounted for less than half of all job separations.

However, job losses that occur in mid-career as a result of declining employment in particular industries or firms can pose serious problems for workers and their families, leading to unemployment, reduced earnings, and other hardships. The BLS estimates that, between 1981 and 1985, 5.1 million workers lost jobs they had held for more than 3 years, due to slack work, job abolition, or a plant or business closing. On average, a little more than one-half million of these workers lost jobs each year because their plants closed or their employers went out of business. Most of the affected workers experienced some unemployment, and some had lengthy unemployment spells. Other research based on these data, however, has found that the duration of joblessness over the year for displaced workers was similar to that of average workers who had spells of unemployment.

Evidence suggests that earnings losses do not persist over the long term. Losses for workers whose jobs were abolished vary considerably, reflecting losses in specific human capital and sometimes higher wages associated with unionization. On average, wages upon reemployment have been about 90 percent of prior wages. Losses typically have been higher in smaller and weaker labor markets. Workers with more job tenure experienced larger losses, as did those with less education. More educated workers had less unemployment. Workers with more schooling have better access to labor market information, a greater capacity to identify new opportunities, and more skills of general value. In addition, forgone earnings during unemployment are higher for workers with more human capital. Evidence shows that schooling eases the transition for those leaving agricultural as well as industrial jobs.

Employment growth and a general absence of impediments to mobility have facilitated the voluntary reallocation of labor to expanding sectors. When jobs have been lost involuntarily, problems for individuals typically have been temporary and usually mitigated by their general knowledge and skills and by the availability of alternative employment.

POLICIES FOR LABOR ADJUSTMENT

The flexibility of the U.S. labor market, and the relative ease with which workers can move between geographic areas and avail themselves of better job opportunities, have contributed substantially to economic growth. Government can improve labor adjustment by reducing existing market interventions and avoiding the imposition of new ones.

A number of labor market regulations, such as the minimum wage, many occupational safety and health rules, and occupational licensing, impair flexibility and adjustment. Many studies have shown that the minimum wage is a barrier to work and job-training opportunities for inexperienced and unskilled workers. Erosion in the real value of the minimum wage has contributed to substantial recent employment growth and reduced unemployment among black teenagers, both of which are documented in Chapter 2. Further lowering of the minimum wage would increase employment and accumulation of human capital among young people, thereby raising future wages as well as economic output.

Providing unemployment insurance and training may produce net economic gains by broadening public support for the removal of trade barriers and other market distortions. But programs intended to ease the transitions of workers to new jobs can slow economic change by creating work disincentives and other sources of inefficiency. Improving current policies that directly address adjustment—unemployment insurance, pension rules, and retraining—would increase market flexibility and enhance prospects for growth. Establishing protection for existing jobs, such as requiring advance notice of layoffs, would introduce new market rigidities.

Reducing the Inefficiencies of Unemployment Insurance

The Federal-State unemployment insurance program, established more than 50 years ago, provides partial wage replacement for experienced workers who lose their jobs because of temporary layoffs or job terminations. With few restrictions, States establish the amount as well as the duration of compensation and the structure of payroll taxes. Weekly benefits replace about 35 percent of prior wages on average; in most States compensation may be received up to 26 weeks. Total benefits were about $14 billion in 1987. Benefit outlays are greater in years of higher unemployment; for example, they were $23.8 billion in 1982, about 70 percent higher in nominal dollars than in 1987.

Compensation is intended to reduce earnings losses that result from changing market conditions and thus to cushion labor adjustment. By replacing a portion of wages during unemployment, benefits support the search for a new job. At the same time, benefits tend to prolong unemployment by reducing its costs for workers and allowing them to search longer, but they do not appear to increase subsequent wages. Recent Federal reforms and State actions to tighten eligibility and job search requirements have reduced work disincentives substantially. Additional policy options to enhance reemployment incentives and the effectiveness of job search efforts are being explored.

Further improvements can be realized in the program's financing. Risk rating, or experience rating, is fundamental to private insurance, because, when higher premiums are charged to insure against greater risk, insured parties have an incentive to reduce risk. Since the unemployment insurance system is only partially experience rated, it provides incentives that increase unemployment. When a firm can lay off workers temporarily and spread much of the cost to other firms that also pay taxes into the program, it is more likely to generate layoffs. Strengthening experience rating would reduce unemployment by making individual firms bear more of the cost, thereby encouraging them to explore alternatives to temporary layoffs, such as rescheduling work or modifying inventories.

Financial transfers that are generated by the tax structure of the unemployment insurance system subsidize declining firms and those in seasonal or cyclical industries at the expense of growing or stable firms. Studies have found that agricultural and construction firms are heavily subsidized by firms engaged in trade and in finance, insurance, and real estate. States have made a number of changes during the 1980s to improve experience rating, partly in response to Federal law. The Department of Labor, in an effort to increase information and accountability, recently has required more complete State reporting of experience rating.

Improving Pension Rules

Pension termination insurance, which has been a Federal responsibility since 1974, has been funded by a flat premium per worker. As a result, firms that fund their pension plans inadequately have been subsidized at the expense of firms that maintain sound funding. These indirect subsidies to poorly funded plans have reduced incentives for adequate funding and benefited failing firms at the expense of healthier firms. This Administration strongly supported recently enacted legislation that establishes partial risk rating of pension premiums and improved pension funding rules. This legislation will reduce the automatic financial transfers generated by the system. An additional step would allow pensions to be insured privately, provided basic standards are met. Private pension insurance would have major advantages. Premiums would be based on risk, thus preserving incentives for adequate pension funding as well as eliminating remaining automatic subsidies, and insurance would likely be provided at an even lower cost for well-funded plans.

Government regulation of pensions can distort resource allocation through the effect on job tenure and training as well as through cross subsidies among firms. Rules such as those requiring early vesting may increase worker mobility, but at the same time such rules diminish employer incentives to provide training. Employer investments in job training are based on expectations of future returns from increased worker productivity. To the extent that employment contracts are precluded from offering pension inducements for longer worker tenure with the firm, the amount of training is likely to be reduced, along with future productivity. Among other features of privately negotiated employment contracts, pension provisions reflect the benefits and costs of job attachment to workers and firms. Government mandates with regard to pensions and other employment benefits can prevent employers from offering the most desirable pay packages to workers and can slow investment in human capital.

Retraining

Government-supported retraining may facilitate reemployment following job loss. Job training and retraining, however, are primarily a private responsibility. Since private firms know best what skills they require, they can tailor training to their needs. In its role as employer, the Federal Government provides substantial amounts of training for military and other Federal occupations. As discussed earlier, however, the wider effectiveness of government-run training programs in raising earnings over the long term has not been established.

The Administration's proposed Worker Readjustment Assistance Program (WRAP) would replace Trade Adjustment Assistance (TAA) and other existing retraining programs. In addition to training, TAA provides compensation which, in combination with unemployment insurance, can be received for as many as 78 weeks. Evidence shows that TAA has failed to facilitate adjustment and has prolonged unemployment. WRAP would offer training to all experienced workers who have lost their jobs, in recognition that adjustment costs are unrelated to the cause of job loss, whether changing trade patterns or other factors. At the options of States, vouchers for purchasing training in the market could be offered along with traditional retraining services and job search assistance.

Costs of Job Protection

Government actions to insulate industries and jobs from international competition, or to protect existing jobs by requiring employers to provide advance notification of layoffs and plant closings, would reduce market flexibility and diminish overall employment opportunities. Proponents argue that advance notice of layoffs would ease worker adjustment. Mandated notice, however, as called for in proposed trade legislation, would constrain the responses of firms to changing market conditions and reduce employment. Because required notice means that employers would incur greater liabilities in the event of business contractions, hiring during expansions would be curtailed. Higher costs and increased risks also would discourage new business formation. In contrast, when job security provisions are chosen in the marketplace, they can be weighed against other forms of compensation according to workers' preferences and employers' costs.

Employers frequently provide their workers with advance notice. Recent government surveys have found that advance notice of the specific date of an impending layoff was given in about one-half to two-thirds of the cases surveyed, and general notice in one-third to three-fourths of the cases. On average, general notice was given 46 days in advance. Notice was not the result of collective bargaining alone; the likelihood of receiving notice was about equal in union and nonunion establishments.

Although labor market performance is affected by numerous forces, including macroeconomic and tax policies, an important reason for high unemployment and lack of job growth in Europe has been labor market rigidities. Many European governments severely restrict an employer's ability to dismiss workers, and they require substantial severance pay and notice prior to layoff. Unemployment benefits are higher and last longer than in the United States, commonly replacing at least 70 percent of prior wages for a year or more, and more of the unemployed qualify for benefits. Financing, moreover, is not experience rated. Employment in Western Europe has been flat since 1970; during the same period, employment in the United States has increased by more than 40 percent. Unemployment rates in Western Europe have approximately tripled since the early 1970s, and they are now higher than in the United States, thus reversing earlier patterns. The incidence of long spells of unemployment is substantially higher in Western Europe than in the United States, as is unemployment among youth.

European governments have realized that the inflexibility of their labor markets due to job security mandates, along with a variety of other labor market interventions, have impaired growth in employment and spawned high unemployment rates, particularly among youth. During the 1980s, European countries have begun to reverse previous policies of increasing job protection, unemployment compensation, and other measures that impose constraints on labor markets and distort incentives. A number of countries have reduced the costs of employment termination by relaxing job protections and increasing the ability of employers to effect dismissals. Government-mandated severance pay in Western Europe has been reduced from the levels of the late 1970s. In a majority of OECD countries, unemployment benefits, which had risen during the 1970s, have been reduced. Stricter eligibility conditions have been applied and work incentives strengthened. In a number of countries, minimum wages have been held constant in nominal terms and reduced in real terms. Several countries have reduced minimum wages for youth.

Policies such as those in Western Europe that had attempted to reduce adjustment costs by preserving existing jobs at the expense of new jobs have been recognized as shortsighted, benefiting some workers by shifting high costs to others. In addition to the steps that individual countries have taken to reverse such policies, the OECD and the Venice Economic Summit formally recognized the need for removing labor market barriers and increasing flexibility. At its May 1987 Ministerial meeting, the OECD concluded that improved functioning of labor markets is essential for sustained economic growth.

CONCLUSION

Investments in human capital and in science and technology have made substantial contributions to productivity and economic progress. In the future such investments may assume even greater importance. Market incentives provide the primary mechanism for the accumulation and allocation of investments in knowledge and skill as well as in physical capital. Government support for education and research can improve prospects for long-term economic growth, but it should be linked closely to private incentives. Public support of most education and training and of research should be limited to investments for which individuals and firms do not have adequate incentives and for which benefits exceed costs, including costs that arise from tax distortions. Many government interventions, including those that are designed to spur increases in knowledge, generate costs and inefficiencies that in the end retard growth.

Economic progress requires change, and to realize the gains from investments in human capital and in research and development it is vital that markets remain flexible and responsive. To resist change and to introduce protection that slows change will stifle investment and diminish opportunities for future growth. Policies that reduce market barriers and strengthen the incentives of individuals and businesses to invest and to innovate are the surest ways to improve economic performance. Government can encourage further advances in knowledge and economic progress by maintaining flexible markets and a stable framework in which property rights are protected and initiatives are rewarded.

CHAPTER 6

Airline Deregulation: Maintaining the Momentum

DURING THE LAST DECADE there have been dramatic changes in the way America's transportation sector is regulated. The railroad, bus, trucking, and airline industries all have become more efficient as a result. Since virtually all aspects of the economy depend on the transportation system, gains in this sector help the overall economy, thereby improving U.S. competitiveness. The principal force underlying these changes in productivity has been a deregulatory environment that allowed greater price flexibility for businesses while reducing government interference.

The deregulation of trucking, railroads, buses, and airlines began in the 1970s when government officials recognized that regulation was stifling competition. After the regulatory bodies began to reduce their control over prices and entry, the Congress enacted landmark legislation loosening or abolishing Federal controls over the transportation industries. For example, the Staggers Rail Act of 1980 allowed railroads to set prices freely in markets where they could not exercise market dominance. Railroads no longer are subject to rate regulation in these markets, and price intervention on the part of the Federal Government has been reduced. The Motor Carrier Act of 1980 relaxed government regulation of trucking. Because barriers to entry have been lowered, many new competitors have entered the market. Trucking firms now have greater freedom in setting rates. The Bus Regulatory Reform Act of 1982 relaxed both entry and fare restrictions for the intercity bus industry. Although government regulation has not been eliminated entirely from these industries, the role of the government has been reduced significantly.

While deregulation substantially improved productivity and efficiency in the transportation sector, the Airline Deregulation Act of 1978 has had the greatest immediate impact on the public. The benefits to travelers from airline deregulation have been estimated to exceed $11 billion per year.

The deregulation of the airline industry has permitted greater competition which, in turn, has led to a dramatic restructuring of the airline industry. The industry has become more streamlined. Fares generally are much lower than they would have been under regulation, and a wider menu of travel options is available to the consumer. Although there had been concern about air service to small communities following deregulation, such service, as measured by the frequency of flights and flight length, has improved.

Despite the economic gains from deregulation, complaints about a possible decline in the level of safety and an increase in flight delays have increased. It is sometimes argued that regulation should be restored. These concerns must be examined in the context of the evolution of the airline industry since deregulation. While airline safety is a serious public concern, the record indicates that safety has not deteriorated under deregulation; in fact, it appears to have improved. Moreover, while airport and airspace congestion has worsened, this is a direct result of the *success* of deregulation. More people are flying now than ever before, but the local and Federal authorities charged with managing the airports and airspace have been unable to adjust to the dramatic growth in demand. Congestion is a natural consequence of the fact that growth in demand for air travel has exceeded the supply of airport and airspace services.

The solution to the problem of increased congestion lies not in resurrecting an outmoded system of regulation with onerous restrictions on entry and fares. Rather, the solution lies in devising economic approaches that will enable the supply of airport and airspace services to keep pace with the growing demands of the American public for air transport.

THE REGULATORY ENVIRONMENT

For nearly four decades before the enactment of the Airline Deregulation Act in 1978, the Civil Aeronautics Board (CAB) exercised extensive regulatory control over the domestic airline industry. The CAB controlled the entry and exit of carriers on interstate routes and approved the fares charged on those routes. The CAB appears to have tried to stabilize the industry, attempting to shield existing carriers from entry and price competition, and to provide service to a large number of communities. To the extent that airlines competed, they focused on features other than price, such as departure frequency and food quality. This competition over service quality limited the CAB's ability to use price and entry regulation to achieve its goals concerning profits, service, and stability.

In order to provide service to more places, the CAB attempted to favor short-haul service in two ways. First, for long-haul routes, fares were set at high levels relative to costs, and fares for short-haul routes were set at low levels relative to costs. As a result, passengers on long-haul routes paid significantly higher prices than they would have under competition.

Second, direct subsidies were given to airlines that served small communities. The Federal Government frequently has used subsidies to ensure that services were provided to less densely populated areas. For example, subsidies have been provided for post offices and telephone service in small towns and remote areas. Thus it is not surprising that subsidies were given to the airline industry for similar purposes.

These direct subsidies have created a number of problems. For example, because airlines were subsidized on the basis of the number of departures, they had an incentive to schedule flights with multiple stops, thereby resulting in lengthy flight times from small communities to major cities. Since the subsidies did not vary with the time of day, airlines typically scheduled their service to small communities during off-peak periods. Because the planes used on these subsidized routes often were borrowed from other routes, they were not efficiently tailored to the size of the subsidized markets.

Even with the subsidy program, many carriers chose to limit service provided to small communities. From 1970 to 1975, the CAB permitted certificated carriers to reduce their service to small communities by nearly 25 percent. At the same time, unsubsidized commuter carriers not under the CAB's regulatory jurisdiction were increasing service to these communities.

Subsidies to airlines peaked in 1981 at $109 million. As traffic on commuter airlines grew, fewer subsidies were needed to maintain service; consequently, subsidies now have fallen to less than $30 million. A 1987 study by the Department of Transportation (DOT) projected that an end to these subsidies would result in a loss of service to 70 of the 102 airports (excluding Alaska) currently in the program. None of these 70 communities board more than 13 passengers per day, and over half board fewer than five passengers per day. In addition, almost half of these airports are less than 75 miles from other communities with air transportation, and only eight are more than 150 miles from alternative air transport. Although the Airline Deregulation Act would have ended these subsidies in 1988, legislation has just been enacted extending the program for another 10 years.

In order to maintain service to small communities and stability in the industry, the CAB regulated entry into the profitable long-haul markets and exit from the less-profitable short-haul markets. The type and extent of route regulation depended on the category of the carrier. Route restrictions were imposed on all interstate carriers, except for commuter airlines and charters. For example, carriers often were precluded from operating beyond a stated point. In addition, carriers sometimes were required to make intermediate stops. Restrictions on entry into the major interstate "trunk" markets were particularly stringent. From 1938 through 1978, the CAB did not permit a single new interstate trunk airline to enter the market.

The CAB did allow limited entry in some markets. After World War II the Congress pressured the CAB to permit the creation of "local service" airlines. These airlines replaced much of the federally subsidized service that the trunks provided to smaller communities. Initially, local service airlines were precluded from competing with the trunk airlines. Then, in an effort to reduce the growing cost of the subsidy, the government allowed local airlines to offer service in selected markets served by the trunks. This policy helped foster limited competition between the trunks and the local service airlines.

The few areas where the CAB did not regulate rates, entry, and route structure included small commuter airlines, airlines providing charter services, and intrastate carriers. However, the CAB did limit commuters by setting the maximum gross takeoff weight at 12,500 pounds, which permitted approximately 20 seats. This limitation subsequently was relaxed somewhat, but it still served to restrict commuter service to less densely populated markets.

Intrastate airline carriers had complete flexibility in choosing routes and fares. The intrastate carriers in California and Texas charged significantly lower fares than the interstate trunks charged on routes of similar distances yet made profits. The fare per mile in unregulated markets was often half as much as fares in comparable regulated markets. Fare comparisons between interstate and intrastate markets made it easy to see that there could be substantial gains from deregulation.

RESULTS OF DEREGULATION

Several factors have affected the performance of the airline industry over the last decade. Deregulation, while important, must not be given undue credit or unjust blame for the recent performance of the industry. Technical innovation, for example, has contributed to improvements in fuel efficiency and safety. The performance of the domestic economy also is linked to the overall health of the domestic airline industry, because more people travel when the economy is doing well. Since 1982 the United States has enjoyed its longest postwar peacetime economic expansion. Thus it is important to differentiate between the gains resulting from economic expansion and those resulting from deregulation. Even controlling for such changes in the economy, however, it is clear that deregulation has had a substantial positive effect.

LOWER FARES

The most important economic benefits that have resulted from U.S. airline deregulation are decreases in fares and increases in the frequency of service. The use of discount fares, which offer reductions from the standard coach fare, has increased dramatically. In 1976, 15 percent of travelers enjoyed discount fares; by 1987 this number had grown to 90 percent. The substantial rise in the availability of discount fares has been accompanied by a 15 percent decrease in these fares, adjusting for inflation.

Since the old regulatory policies tended to keep long-haul fares relatively high, the greatest reductions in discount fares have occurred for longer flights. For example, discount prices for flights over 2,500 miles have dropped by 35 percent in real terms. The availability of discount fares has increased significantly in short-haul markets as well. For flights less than 500 miles, the prices of discount tickets have dropped by about 10 percent in real terms.

In contrast to discount fares, average full undiscounted coach fares have increased by more than 10 percent in real terms; however, only about 10 percent of current ticket sales are for full coach fare. Changes in real coach fares also vary with trip length. For trips less than 2,000 miles, average coach fares have increased. For trips exceeding 2,000 miles, real average coach fares have declined.

The widespread reduction in fares is caused by several factors. The elimination of regulated fares was important in long-haul markets. In high-density markets, two other factors contributed to lower fares. First, high passenger volumes in these markets permitted airlines to reduce their cost per passenger mile by making more efficient use of their equipment. Second, these markets also tended to have more discretionary travelers, who could take advantage of discount fares. Indeed, discount fares are used most widely in those markets with the highest passenger volume.

EFFICIENT ROUTING: THE HUB AND SPOKE

The route structure that evolved under regulation has undergone major changes as a result of increased competition. Free entry into city-pair markets has permitted the airlines to develop much more efficient routing patterns than under regulation. The most significant change has been the growth of a "hub-and-spoke" delivery system. As the name suggests, airlines have developed a series of networks analogous to a bicycle wheel. The hub represents the center of the network; the spokes link different origin and destination points. For example, a flight from Hartford to San Diego may be routed through a hub at Chicago.

Leading hubs of all major airlines have shown large increases in traffic since 1978. In several cases airline departures from the major hubs have more than doubled. In addition, the expansion of the hub-and-spoke system following deregulation has permitted four major innovations benefiting fliers.

First, service to airports with low traffic volume has been expanded. While demand may not be sufficient to justify direct flights from small airports to certain other locations, the new distribution system allows the traffic from small airports to be combined at the hubs with traffic from other spokes. This traffic then is routed through the various spokes of the hub. Thus being connected to a hub allows convenient access to many destinations.

Second, flight frequency is greater at both hubs and spokes, allowing the traveler to find more convenient flight times. Pooling traffic at the hubs permits greater departure frequency to and from the smaller airports. The convergence of traffic from the various spokes also permits more frequent hub service. With the expanded set of options, most travelers now are able to schedule their departures closer to their preferred times.

Deregulation appears to have led to an overall increase in the frequency of service; however, there is a wide variation across different markets based on passenger travel demand. Using a random sample of markets from 1976 and 1984, researchers have found that service improved across all market groups. Significantly, markets with the lowest passenger volumes experienced the greatest increase in both service and estimated welfare gain per traveler.

Although some communities have lost scheduled service, only in rare instances has deregulation been the primary cause. A study which took into account the economic and demographic changes in the United States has concluded that the introduction of deregulation has helped to slow the rate at which small communities have lost service. Moreover, deregulation has allowed commuters and regional carriers to expand more rapidly, feeding passengers into the hubs and thereby strengthening the hub-and-spoke system. Since 1978 the regional and commuter airlines have more than doubled the number of their passengers and added service to over 140 airports not previously served by these carriers.

While the growth of hubs has improved the frequency of service, it also has increased average travel time somewhat. Hub-and-spoke configurations are partly responsible for this increase, since they typically involve a tradeoff between departure frequency and travel time. More flights to a particular destination may be available, but some of these flights may involve brief stopovers in other cities. Comparing airline regulation in 1977 with a simulated deregulation scenario, researchers have found that the average time increase for flights under 2,500 miles has been less than 10 percent, while average flight times have decreased about 4 percent on trips over 2,500 miles. A study has shown that consumers place greater value on the increase in departure frequency than on the losses that result from the small average increase in travel time. In some cases, the hub-and-spoke system has had a salutary effect on travel time. For example, hub-and-spoke networks have resulted in a dramatic reduction in flights with two or more intermediate stops, thus leading to a reduction in travel time for many city-pairs.

A third benefit from hub-and-spoke networks is that larger aircraft can be used, because traffic has been consolidated. Bigger planes cost less to operate per seat mile than smaller planes. In addition to the cost savings, larger aircraft usually are thought to afford greater comfort, so fliers also benefit in this quality dimension.

A fourth benefit of the growth of hub-and-spoke systems is that more fliers have the opportunity to book on a single airline for their entire flight. Research has shown that fliers strongly prefer traveling on a single carrier to reach a destination rather than changing airlines on one-stop flights. Benefits include better coordination of flight times and better baggage services. The consolidation of airlines at a hub can provide more opportunities for passengers to choose single-line service. In 1977, 68 percent of all connecting passengers changed airlines, whereas only 12 percent do today.

EFFECTS ON LABOR

While airline productivity has increased, the effects of deregulation on the airline labor market have been mixed. Employment in the airline industry has increased as a result of increased air travel. From 1977 to 1986 total airline employment increased by more than one-third. Because of general changes in the economy and dramatic changes in energy prices, it is difficult to isolate the effect of deregulation on wages. From 1977 to 1984 it appears that airline wages did as well as other sectors of the economy, if not better.

The aggregate impact on wages masks an important change in the wage structure resulting from deregulation. The introduction of deregulation led to intense pressure to cut costs so that lower prices could be offered. This downward pressure on costs induced airlines to seek work rule changes as well as changes in wage rates. These changes have in some cases led to a dual wage structure in which newly hired workers earn less for performing the same jobs than previously hired workers.

INCREASES IN PRODUCTIVITY, PROFITS, AND WELFARE

Besides leading to lower fares and increased service, airline deregulation has resulted in more productive uses of inputs, such as labor and equipment. The hub-and-spoke system, for example, has helped to deploy aircraft fleets more efficiently, so more passengers can be served better using the same resources. For example, commercial planes flew with 55 percent of their seats filled in 1976 and this load factor increased to 60 percent in 1986. Moreover, airlines have installed more seats in their aircraft since deregulation to accommodate the growth in demand. U.S. airline productivity increased by 7 percent from 1976 to 1983, while the productivity of non-U.S. carriers decreased by nearly 40 percent over the same period. This comparison lends strong support to the view that deregulation has had a dramatic positive impact on U.S. airline productivity growth.

The effect of deregulation on industry profits is difficult to estimate. The difference between the average return on capital invested in the airline industry in the period following deregulation and in the decade preceding deregulation is relatively small. Both before and after deregulation the industry experienced financial losses during periods of sharp fuel price increases and economy-wide recessions. Attempts to control for macroeconomic factors and changes in input prices suggest that the financial performance of the airline industry is better than it would have been under continued regulation. One study has estimated that profits in 1977 would have increased by more than $4 billion if the airlines had been fully deregulated at that time.

To measure the overall welfare effects of deregulation, it is necessary to quantify effects on airlines and travelers. Travelers have been affected principally through reduced fares, increased frequency of service, and changes in travel time between destinations. Both business travelers and pleasure travelers have benefited. Moreover, travelers using all sizes of airports experienced a net average gain in welfare. The welfare increase for the average traveler amounts to roughly $20 per trip. Summing the estimated aggregate gains to travelers and airline companies yields a total of approximately $15 billion in annual benefits from deregulation.

INTERNATIONAL CONSEQUENCES

The U.S. experience with deregulation has been influential in leading other countries to deregulate air travel. Great Britain recently privatized its major state-owned airline. Canada and Japan are considering similar moves. New Zealand has taken steps parallel to those in the United States to deregulate its air transport industry, and Australia plans to phase in airline deregulation by the early 1990s. After nearly 3 years of debate the European Community (EC) has approved the first steps of a liberalization package that took effect at the start of 1988. Greater entry by carriers within the EC will be permitted, and it is estimated that fares for flights within Europe will decline by an average of 10 to 15 percent.

The International Air Transport Association (IATA) plays a major role in attempting to cartelize international air travel by providing a forum for price coordination exempt from the antitrust laws. Limitations on international competition also result from government regulation of entry and prices in international markets. Through a series of bilateral agreements, countries have divided international markets. In many cases only one carrier from each country is permitted to serve a particular route. These restrictions on entry and price competition have led to a market structure reminiscent of the domestic U.S. market under the CAB. Fares tend to be higher, and firms compete, if at all, on service rather than on price. Governments sometimes negotiate bilateral agreements that not only limit total capacity but also divide the airline traffic and profits between themselves. The principal source of price competition in European markets comes from charter services, which are outside of IATA's purview. Indeed, charter services currently account for more than half of all travel in Europe.

In order to promote competition in international aviation, the United States has entered into a number of bilateral negotiations with other nations to increase the access of U.S. carriers to foreign destinations in return for greater foreign access to U.S. destinations. Where these agreements permit greater entry and price flexibility, the increased competition on international routes has resulted in lower fares.

The United States is pursuing further liberalization of international airline travel through similar bilateral negotiations. Although such negotiations are only a first step toward greater international competition, they could result in global economic gains. Allowing U.S. carriers free entry into foreign markets would provide significant benefits to consumers and domestic carriers. Offering foreign airlines free access to U.S. destinations would provide much more convenient international direct flight service to consumers worldwide.

MANAGING THE INCREASED DEMAND FOR AIRSPACE

Deregulation has given rise to the highest levels of commercial air travel ever experienced in the world. If not managed properly, increased air traffic could lead to greater congestion, and in some situations could raise safety concerns. The deregulated environment has been quite effective in maintaining air safety. The growth of air traffic, however, has raised some important issues concerning the compatibility of airline deregulation with continued government management of airspace and airport services. If the benefits of deregulation are to be enhanced, market forces should be introduced to reform those elements of the air transport industry that are still regulated by the government.

SAFETY

Airline accidents have declined steadily since the 1950s and this trend has continued since the advent of deregulation in 1978. From 1978 to 1986 departures increased by 28 percent, miles flown by 48 percent, revenue passenger miles by 61 percent, and revenue passengers by 52 percent. In light of this large increase in air travel, the accident rate statistics under deregulation appear even more favorable. The decline in fatality rates is particularly encouraging, since load factors and the number of seats per plane have risen since the end of regulation. Chart 6–1 shows that accident and fatal accident rates for all scheduled passenger and cargo operations have declined dramatically during the last 30 years, reaching an all-time low in the period since deregulation.

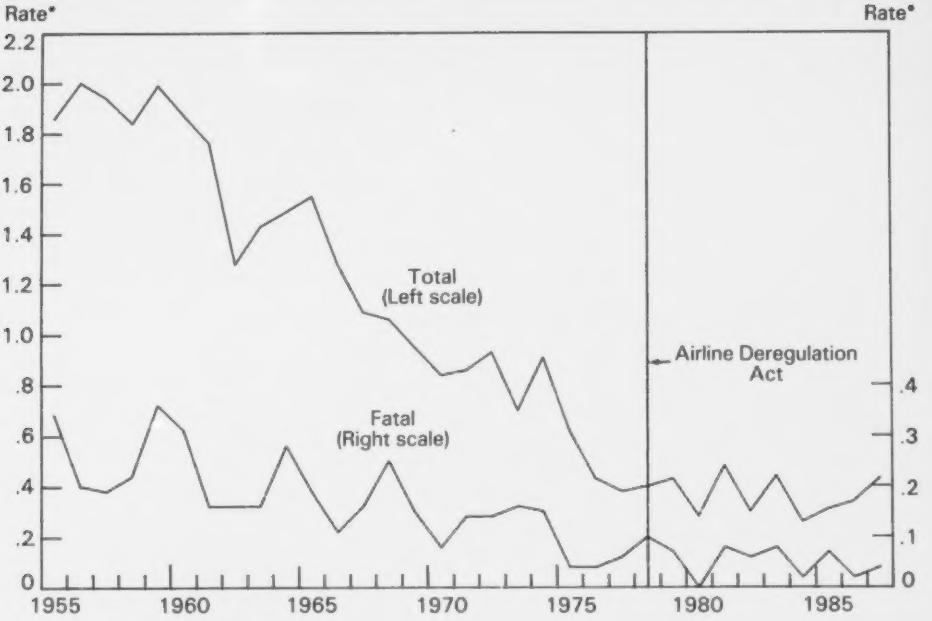
Even if extremes rather than averages are compared, air safety looks quite good following deregulation. A comparison of the worst year for accidents following deregulation with the previous 30 years shows that in only 3 years prior to 1978 were there fewer accidents. A similar picture emerges if the best year achieved under regulation is used as the benchmark for safety. In 4 of the 10 years following deregulation, there have been fewer accidents than in regulation's best year, notwithstanding the sharp increase in air travel.

Improvements in flight safety performance have not been confined to the major carriers. Although only recent data are available for nonscheduled service, commuters, and air taxis, their safety records from 1971 to 1978 can be compared with those from 1979 to 1986. For nonscheduled operations, accidents per 100,000 flight hours have fallen 7 percent, and fatalities per 100,000 flight hours have declined 53 percent. Accident and fatality rates for commuters and air taxis have shown similar improvement, falling 27 percent and 36 percent, respectively. These statistics demonstrate that safety performance has improved in all segments of the industry since deregulation.

Critics of deregulation have argued that airline safety would deteriorate under competition, because competitive pressures would induce firms to cut back on safety expenditures. Under such circumstances the incentives to reduce costs could result in the airlines exposing passengers to greater risks. In addition, price regulation had

Chart 6-1

Airline Accident Rate



*Accidents per 100,000 departures.

Note.—Data relate to scheduled passenger and cargo operations of U.S. certificated air carriers; data for 1987 are preliminary.

Sources: Civil Aeronautics Board and National Transportation Safety Board.

forced airlines to focus their competition on nonprice factors such as safety, and deregulation would end that incentive. Thus it was argued, airlines would pay less attention to safety in a deregulated environment, and the skies would become less safe.

After nearly a decade of experience with deregulated air travel, these fears have proven to be unfounded. Studies have found no evidence of a decline in the safety performance of the airline industry following deregulation. Furthermore, there appears to be little or no correlation between safety and financial performance in the airline industry, either before or after deregulation. In addition, profitability appears to have had no effect on maintenance expenditures, and there is no systematic evidence that airlines have cut corners on safety.

If deregulation were leading to reduced safety precautions, then this change should affect the characteristics of accidents that do occur. For example, if airlines were taking less time to train pilots or were overworking them, then the share of accidents caused primarily by pilot error should rise. Similarly, if there were less emphasis on maintenance, then the percentage of accidents primarily due to equipment failure should rise. The statistics show, however, that the proportion of accidents primarily due to pilot error as well as the share primarily due to equipment failure have changed little since deregulation.

The relative ranking of the factors contributing to fatal airline accidents before and after deregulation also has been quite stable. Pilot error is the most common factor followed by the weather and then by air traffic control. Maintenance is the least common factor. In the decade prior to deregulation, pilot error was a contributing factor in 32 fatal accidents, while maintenance was a contributing factor in 2 accidents. In contrast, pilot error was a contributing factor in 12 accidents and maintenance in only 1 accident in the period since deregulation.

Recently the public has expressed concern that the rapid growth in air traffic stemming from deregulation has put unusual stress on the air traffic control system. At the same time there have been reports that air traffic controllers may feel overburdened. Since reaching a low in late 1981 following the illegal strike by the air traffic controllers union, controller staffs have been growing to meet the increasing demand. The evidence does not support the claim that changes in controller staffing have led to a decline in safety. Indeed, the share of accidents primarily due to air traffic control error has not changed since deregulation.

Although the accident and fatality statistics point to improved rather than deteriorating safety since 1978, some observers have claimed that the "safety margin" is declining. However, measurement of the safety margin is problematic. Near midair collision statistics play a major role in this concept. Unfortunately, there is no consistent near midair collision data that would permit a comparison of performance before and after deregulation. In addition, a 1985 change in the procedures for processing near midair collision reports makes it difficult to discern reliable trends after deregulation.

A near midair collision is defined as an incident in which the possibility of a collision occurs as a result of aircraft coming within 500 feet of each other. A pilot or crew member also can report a near midair collision if the individual believes that a hazard existed between two or more aircraft, even if the 500-foot criterion were not met. Near midair collisions then are categorized as critical (the most serious), potential, and no hazard (collision improbable). Approximately 70 percent of the total increase in near midair collision reports from 1985 to 1986 has been in the "no hazard" category. The number of reported near midair collisions does not appear to be correlated with any measure of accidents, fatalities, or number of actual midair collisions.

Midair collisions constitute a very small fraction of all aircraft accidents involving a commercial carrier. Most accidents occur at takeoff or landing and do not involve another aircraft. Since the passage of the Airline Deregulation Act of 1978, only one midair collision involving a domestic commercial jetliner has occurred in the United States. Since near midair collision reports do not appear to be correlated with air carrier accidents or accident rates, and actual midair collisions involving commercial jets have been rare, the concern about the safety margin appears to be exaggerated.

An often neglected but very significant consequence of deregulation is that lower fares and more frequent service have caused air travel to be substituted for other modes of transportation. Since air travel is safer than other forms of intercity travel, overall transportation safety is improved as people substitute a safer form of transport for a less safe one. Between 1980 and 1984, for example, deaths per billion passenger miles for passenger car travel averaged 35.7, whereas for airline travel they averaged 0.3. Thus, for every billion miles of air travel that people substitute for car travel, there will be approximately 35 fewer deaths. A study has estimated that more than 800 lives are saved each year because people now travel by plane rather than by car.

It is important to recognize that deregulation did not affect the Federal Government's role in the regulation of safety. The Federal Aviation Administration (FAA) has continued to monitor airlines' safety-related activities. One study has concluded that airlines consider the FAA standards to be "bare-bones" minima for operation, and they routinely do more than the FAA calls for. For example, the airlines have voluntarily set standards for aviation equipment through a nonprofit corporation owned by the airlines.

While there is likely to be a valuable role for an external body to oversee safety in the airline industry, government regulation represents but one of many approaches that could be adopted. In many other industries, private organizations such as Underwriters Laboratories and insurance groups provide monitoring and safety standards. The market provision of such services might work similarly in the airline industry.

As the safety statistics suggest, competition does not appear to provide airlines an incentive to reduce safety. In fact, market forces may reinforce airline safety considerations. When an airline experiences an accident, the price of its stock suffers a loss. If carriers attempted to reduce safety precautions to an unacceptable level, they could be affected adversely by FAA enforcement actions, increased insurance premiums, increased costs of borrowing, and a loss of reputation. Thus, firms will consider these consequences when they develop their safety management practices.

In summary, the evidence shows that safety has not deteriorated as a result of airline deregulation. Even if safety were declining, a return to price and entry regulation would not be the answer. Protecting airline profits through regulation of price and entry is unlikely to result in improved safety, since there is scant evidence that changes in financial variables lead to changes in safety performance. With a return to regulation, however, the safety gains from intermodal substitution of air travel for other, less safe forms of transport would be forgone.

DELAYS

One feature not addressed by airline deregulation was the management of delays. Delays occur when the demand for system capacity exceeds the available supply. Delays usually are caused by congestion. Just as highways often become congested during rush hours, so do airports and airspace. Most delays occur at crowded airports during peak periods, just as most highway delays occur during rush hour traffic jams around major cities. In 1987, for example, 85 percent of total recorded delays were associated with only 22 airports.

The primary responsibility for managing the U.S. airspace continues to lie with the FAA. The policies adopted by the FAA have an important effect on the amount and distribution of delays. To understand appropriate remedies for problems related to delays, it is useful to have some understanding of how the air traffic control system works.

In the United States more than 600 airport control towers clear planes for takeoff and landing. To help regulate traffic between airports, there are 20 domestic en route air traffic control centers which span the continental United States. These facilities help manage more than 40 million flights per year. To simplify this task, the airspace is divided into a number of sectors. Each sector corresponds to a parcel of airspace within which a controller is responsible for the safe passage of aircraft. Of the 47,000 people employed by the FAA, about 15,000 are air traffic controllers.

Weather conditions play a major role in contributing to delays. Because bad weather reduces an airport's capacity to handle flights, it can generate delays. The FAA reports that in 1987 approximately 70 percent of flight delays were weather-related, and 23 percent were volume-related. More specifically, the FAA estimates that 11 percent of delays were due directly to traffic volume at airports, while 12 percent resulted from high traffic volume at en route centers. Prior to deregulation in the 1970s, all volume-related delays constituted less than 5 percent of total delays, and weather accounted for roughly 80 percent of total delays.

Unfortunately, incomplete measurement of delays, together with changes in the definition of "delay," make it difficult to assess long-term trends. The FAA attempts to measure only major delays due to air traffic control. Prior to 1982 only delays over 30 minutes were reported. Since then the FAA has recorded delays of 15 minutes or more. The number of delays varies greatly from one year to the next, due mainly to the vagaries of weather.

While delays are unpleasant, some amount of delay at peak periods is usually appropriate. Actions taken to control delays should balance the benefits of reducing delay during peak periods against the cost of additional capacity. Even if it were possible to eliminate all delays, such a policy would not necessarily be efficient, because the costs of eliminating delays during peak periods would exceed the benefits. For example, although it might be possible to build a superhighway that could accommodate all rush hour traffic, most of the lanes of this highway would remain empty for the vast majority of the day. The costs incurred in building such a highway are likely to far exceed the benefits of eliminating congestion and delays at rush hour.

Current Approaches for Managing Congestion

The FAA and DOT have taken a variety of actions to address concerns about air traffic congestion. After the strike by air traffic controllers in 1981, the FAA adopted a new policy to minimize the number of aircraft that the system must track at any one time without reducing the overall volume of daily flight activity. When congestion is anticipated at the destination airport, the FAA requires that a plane wait on the ground. This policy, while perhaps addressing safety, actually may have introduced significant delays. If planes were allowed to circle in the vicinity of destination airports, waiting for weather or congestion to clear, unnecessary delays could be avoided.

To help ease the delay problem, the FAA has undertaken a major restructuring of the airspace along the east coast. The FAA significantly expanded air traffic capabilities through an improvement in routing procedures. This change required only a very small addition of personnel and equipment. The airspace reorganization is analogous to reducing traffic jams by increasing the number of lanes on a roadway and improving the timing of stoplights. The creation of additional departure routes and airways was accomplished primarily through better charting, efficient realignment of existing paths, and increased coordination among air traffic facilities. Similar plans for restructuring airways along the west coast are under development.

The Department of Transportation periodically has attempted to enlist the help of the airlines in sorting out scheduling problems. In 1984 and again in 1987, the DOT brought the airlines together to engage in scheduling discussions aimed at reducing delays. The DOT believes that these meetings have helped to reduce excessive bunching of departures at peak periods.

Since pricing mechanisms are not used to allocate takeoffs and landings at the most desirable times, the airlines have little incentive to transfer some of their peak traffic to off-peak periods. Reliance upon DOT meetings to deal with scheduling issues arises at least in part because pricing of airport usage does not reflect congestion costs.

Due to the increasing concern about delays and service, the DOT recently required airlines to provide information on all delays, except those related to maintenance. Beginning in September 1987, monthly tabulations covering approximately 80 percent of all flights have been made available on a flight-by-flight basis. Delay statistics for all flights at the reporting airports also are being calculated.

If airport services were priced to reflect congestion costs accurately, then prices would convey much of the information that this disclosure rule attempts to provide. In the absence of price signals, the DOT statistics may encourage some travelers to switch to flights that are less likely to experience delays. The response of travelers would provide an incentive for the airlines to improve scheduling and operations.

While the publication of delay statistics provides consumers and planners with some information about the specific sources of delay, the disclosure requirement may not lead to improved consumer service. For example, the willingness of an airline to hold a connecting flight for the late arrival of another flight may be affected. Particularly at a hub, one plane arriving late could cause a number of other planes to be held for connecting passengers. If the airline holds the connecting flights, its on-time performance record will be harmed. If it does not hold the flight and passengers miss their connections, the airline's performance may appear better. Thus, actual delays experienced by travelers could increase as the reported statistics appear to improve.

To meet capacity needs in the longer term, the FAA is attempting to increase the pace at which the airport and airways system is being modernized. The agency is in the process of designing and building a new system of radars, communication devices, and computer hardware and software as part of the National Airspace System Plan. These improvements will allow the system to handle more air traffic. The FAA is also in the process of training more controllers. Unfortunately, the implementation of many aspects of the National Airspace System Plan are much behind schedule. Technical problems have slowed the development and introduction of improved facilities to accommodate more volume.

In the United States, there is only one major new commercial passenger airport planned to be built before the turn of the century. Direct airport capacity expansion faces a number of significant obstacles. There is strong opposition in many communities to the construction of new airports as well as to the expansion of existing local airports. Local noise standards limit traffic growth at many airports. A number of communities recently have passed ordinances explicitly restricting airport traffic. The Federal authorities who manage the overall capacity of the system often have goals conflicting with those of the local communities.

The Federal Government and the airlines have taken a number of steps to address the problems related to delays with varying degrees of effectiveness. The recent trend in delays looks promising. Total delays as recorded by the FAA declined by 15 percent from 1986 to 1987, even though traffic volume continued to climb. Despite this improvement, it is likely that the delay issue will resurface periodically, unless fundamental structural changes are made in the way the airspace is managed and in the way decisions about investment in capacity are made.

MAKING THE SYSTEM MORE RESPONSIVE AND EFFICIENT

Because traffic volume has risen since deregulation, it has become increasingly difficult for the supply of airspace services to keep up with the demands imposed upon the system. Part of the problem is the way the system currently is financed. Instead of paying for services actually rendered by the air traffic control system, operators and travelers pay taxes only indirectly related to costs. The primary source of funding for the system is an 8 percent tax on each airline ticket sold. In 1987 the ticket tax yielded $2.7 billion in revenues, accounting for 88 percent of the revenues collected from users. The remaining revenues come from a tax on aviation fuel, a 5 percent tax on cargo, and a $3 passenger tax on international departures. These revenues flow into the Airport and Airway Trust Fund, out of which part of the Federal spending related to air transportation is financed.

FAA expenditures for fiscal 1987 totaled $4.9 billion. The difference between FAA expenditures and revenues raised from user taxes in 1987 was $1.9 billion. Not all of this difference represents a subsidy from the general public, since the public should pay for the use of the airspace by government agencies such as the Department of Defense. Nonetheless, a sizable portion of this revenue shortfall does represent a subsidy from U.S. taxpayers to the aviation system. The FAA estimates that commercial airlines pay roughly 90 percent of the costs they impose on the system. General aviation, which includes small, privately owned aircraft and business jets, pays less than 10 percent of the costs they impose on the system. The total subsidy from taxpayers to the beneficiaries of general aviation and air carrier activity was approximately $1.1 billion for fiscal 1987.

There are two basic problems with this policy for funding air traffic control and safety services. First, the primary beneficiaries of airline travel are not bearing the full cost. Ending the subsidy to the air transport sector not only would help allocate the supply of airspace services rationally and result in better allocation among transportation modes, but it also would result in a small decrease in the Federal budget deficit. The second problem is that the payments made by travelers and operators are not linked to the use of specific services. The charges are related only tangentially to the costs they impose on the system.

To develop a sensible response to short-term congestion problems and long-term planning issues, it would be useful to obtain information on the value people place on airspace services, a task best accomplished by asking users to pay for services actually rendered. More accurate information on how travelers value capacity would make it possible to determine where adjustments in system capacity are needed.

There are a variety of short- and long-term options that could enhance the efficiency of the air traffic control system. In the short term, the most attractive options include the introduction of realistic pricing of services that could ease particularly troublesome bottlenecks in the system. In the longer term, it is possible to design efficient approaches which avoid the types of delays that have been experienced in the recent past, and that also can meet the demands of a rapidly changing airline industry.

Short-Term Options for Easing Congestion

Virtually none of the measures developed by Federal authorities to address the short-term congestion problem incorporates economic approaches. Because of the way the system currently is managed, airlines have very little incentive to consider the costs they impose on others when flying at peak periods. Charges to aircraft operators do not reflect the full costs of using the airspace and airport facilities at these times. For example, if a plane lands at a congested airport during a peak period, all other planes waiting to land are delayed. Similarly, if a plane takes off during a peak period, planes waiting in line behind it are delayed. Operators will not take these costs into account unless a system is implemented in which they are charged for them.

There are two basic approaches that would help alleviate the congestion problem during peak periods while at the same time promote a more efficient use of available capacity. One would set a price for takeoffs and landings that adequately reflects direct and indirect costs. Direct costs include normal operating and maintenance costs, while indirect costs include the costs of congestion. The other approach would limit the quantity of takeoff and landing slots during peak periods and allow these slots to be bought and sold. Both the fee system and the slot system would allow passengers who value peak-period travel the most highly to have access to airports during these periods. Those passengers who have greater flexibility could elect to take flights during off-peak periods and, thus, take advantage of the lower fares that would be offered then.

The best way to strike an appropriate balance between the costs and benefits of congestion is to introduce tradable slots or variable fees that reflect the costs that each individual imposes on other travelers at peak times. These economic approaches would ensure that operators and customers take congestion costs into account in their travel decisions. Reducing the level of congestion at airports would increase the value of peak-period flights and would promote economic efficiency.

Variants of these approaches already are in use. Airports typically assess landing fees based on aircraft weight because runway wear is generally thought to be related to aircraft landing weight. Few of these fees, however, vary with airport usage or time of day. Distinctions between peak and off-peak periods rarely are made. In addition, the fees typically are quite low. For example, a small private plane can land during a peak period at Washington's National Airport for no more than $6.00.

Airports receiving funds from the Airport and Airway Trust Fund are constrained to some extent in the fees they may charge to users. Fees must be nondiscriminatory; this is interpreted to mean that they must be related directly to costs. Such a condition does not preclude the use of peak landing and takeoff fees, provided that costs are interpreted to include the congestion costs that each airplane imposes on others. These congestion costs should be included in the calculation of peak prices to the extent feasible.

Under the current fee system, on-time performance cannot be purchased. Those travelers who incur high costs when delayed have no way to signal their costs to the system. Passengers cannot simply pay a premium to assure that their flights will arrive on schedule. Except at a very limited number of airports, airlines wishing to offer better on-time services cannot pay more to obtain a takeoff or landing preference. The current system rations airspace and airport services through waiting time and delays, whereas a pricing mechanism would permit a more efficient allocation of landings and takeoffs among those who place different values on their time. Without accurate information on the costs of delays, the airlines and airports lack the criteria to decide how to improve flight schedules to suit passenger demands.

If landing fees adequately reflected congestion costs, some passengers and flights would be induced to switch to off-peak periods when fees were lower. Some airports have begun to use such fees. For example, in 1968 peak and off-peak fees were introduced for general aviation at three major New York airports. The peak-period fee was raised to $25, while the off-peak landing fee remained at $5. This fee schedule resulted in a 30 percent decrease in peak-period traffic and a 19 percent overall decrease in general aviation activity. In addition, there was a marked decrease in delays.

This example shows that the introduction of peak/off-peak pricing differentials can be quite effective. Recently, Boston's Logan Airport announced plans to implement general aviation fees intended to address congestion problems. In 1972 London's Heathrow Airport adopted a peak-load pricing approach. Some U.S. airlines have objected to the charges at Heathrow on the grounds that they discriminate against transatlantic traffic. These arguments notwithstanding, it is clear that proper application of peak-load pricing has the potential to reduce congestion and enhance the efficiency of airline service significantly.

An alternative to peak-period fees is a restriction on the number of landing and takeoff slots available during peak periods. At most airports there are no restrictions on landings and takeoffs other than those imposed by air traffic controllers. Planes typically are handled on a first-come, first-served basis. At O'Hare, La Guardia, Kennedy, and National Airports, however, the FAA has limited the number of takeoff and landing slots available. The FAA, in consultation with the airlines, has allocated slots to the carriers by criteria related to historical usage. The FAA can change this allocation and require one airline to transfer slots to another.

Beginning in April 1986, the FAA authorized the purchase and sale of slots at the four "slot-constrained" airports. Although all airlines currently are free to participate in this slot market, the FAA retains the right to withdraw this privilege and reallocate slots at its discretion. An initial 6-week experiment in 1982, in which over 190 slots were bought and sold, provided evidence of the workability of a slot market. During this experiment a private firm began to offer specialized brokerage services for the airlines. Since April 1986 there have been more than 1,000 slot transactions at the four slot-constrained airports. However, many of the slots have been transferred on only a temporary basis. The uncertainty surrounding the FAA's ability to direct the reallocation of slots or even to close the slot market may make short-term leasing arrangements more desirable for the airlines than outright purchases or sales.

Allowing purchases and sales of slots is a major improvement over the previous system, which allocated slots by committee. The committee process did not allocate slots on the basis of their most highly valued use. In contrast, the slot market allows firms that have a better product to expand their operations by buying slots from other firms. Since the exchange is voluntary, both the buyer and the seller are better off. In addition, consumers generally will be better off, since the airlines have more flexibility to respond to the demands of travelers with different valuations of time. Thus the tradable slot system is similar to the fee system in that it tends to reduce delays while increasing efficiency.

Slots and fees can be tailored to meet particular problems that arise in the air traffic control system. For example, two types of service could be offered in the event of bad weather or problems with the air traffic control system. In the event of such a contingency, some firms could receive priority service, which would entitle them to have priority in taking off or landing. Operators would be assessed a fee for this service, or, alternatively, special rights to priority service could be auctioned or allocated to operators.

The details of a tradable slot or variable fee approach would vary, depending on the needs and characteristics of the various airports. But overall, such economic incentives could help address short-term congestion problems. Moreover, these schemes could be extended to other aspects of the airspace system. For example, a cost-based pricing system for air traffic control and other airspace services could be explored. In Europe, charges are assessed for the usage of some airspace services. At present, users are not charged directly for using the air traffic control network in the United States. By effectively leaving these services unpriced, the system encourages overutilization of this resource. As in the case of allocating services for landing and takeoff, it is important to develop pricing schemes that reflect the actual costs that users impose on the air traffic network. Such schemes could provide valuable information on ways to improve services provided by air traffic controllers.

Economic incentives are but one means of addressing some of the short-term congestion problems. Airport capacity is determined by more than the number of runways. Many other factors limit the overall capacity of the air traffic system. The FAA already has increased capacity through improved routing and planning. It is also possible to increase capacity by adding more support staff at terminals, by changing the distribution of air traffic controllers, and by improving air traffic control procedures. The effectiveness of these changes will depend on where the bottlenecks in the system lie. However, all such changes can be used in conjunction with economic incentives to help address short-term congestion problems.

Long-Term Options for Air Traffic Management

Variable fees and tradable slot systems, two useful approaches for controlling short-term congestion, also could aid in expanding air travel capacity over the long term. For example, revenues from fees or the auction of slots could be used to expand the capacity of the system where it is most needed. In some cases such expansion might include adding runways; in other situations new controllers or computers might be more appropriate. Even if the revenues from fees or slots were not used to add directly to capacity, these approaches could provide very useful information for long-term planning. The price of a slot during the peak period at an airport provides a good measure of what people would be willing to pay for a small increase in capacity at that airport. When this value exceeds the cost of adding capacity, then an increase in capacity is warranted.

To reap the full benefits of deregulation, it is necessary to have a system that is responsive to changes in capacity needs. The current system for planning capacity was developed under an environment in which change was predictable. Routes and traffic patterns were stable as a result of CAB regulation. This stability disappeared with deregulation. The FAA has found itself in the unenviable position of trying to manage the capacity of a rapidly changing industry without having the necessary information.

Capacity planners could make two changes that would help enhance the benefits of deregulation. First, the planning function needs to be linked to data on the value of capacity additions. At present, very little information is available on the value of adding capacity because users are not asked to pay directly for the services they are offered. Second, planning should be more responsive to the needs of local airports. Decentralizing planning would help achieve this goal.

There are several alternatives for restructuring the current system that could help address some of the basic concerns related to congestion. These include redefining the role of the FAA, restructuring the FAA, and changing the organization of the air traffic control system. The FAA currently must try to implement two largely independent mandates: the regulation of aviation safety and the general promotion of aviation. Some observers have argued that the FAA is well-suited to handle aviation safety regulation, but a government agency may be less well-suited to meeting the capacity needs of an industry that is evolving quickly.

One proposal would have the FAA retain its primary role in regulating safety, but relinquish its role as a central planner in the air traffic control system. Some groups have recommended that the control of air traffic be placed under the supervision of a special Federal corporation that would distribute airport grants, hire air traffic controllers, and contract out services. The corporation would have more flexibility than a Federal agency in hiring and paying its employees and in procurement. A board of directors representing the users of the system would help make the corporation more responsive to the needs of its users than the current system is.

Recognizing the potential for inefficiency in a federally sponsored corporation, another proposal calls for placing the supply of air traffic services in the hands of the private sector. Instead of a Federal corporation, a nonprofit corporation owned by the various users would be created. Unlike the current air traffic control system, such a corporation would be funded from user fees, including charges for the use of the controller network. Financing the system on the basis of user fees would provide improved information on where capacity expansion is most needed. A private, user-funded corporation would be free from the constraints of the budget process faced by a Federal corporation, and would have a strong incentive to provide services that meet the needs of travelers. A similar nonprofit, user-owned corporation has operated for over 50 years providing extensive airline radio communications and navigation services. In addition, this corporation has played an important role in setting aviation engineering and communications standards.

Another possibility is for local airports to own and operate their own air traffic control towers. These control towers still would follow the standards set by the FAA and the entity in charge of controlling air traffic. The staffing and investment decisions for such control towers, however, would be made by the management of the local airport. By returning this function to the local airports, the system could become more responsive to the needs of users. The FAA currently allows 17 small Level I control towers to be operated privately. Moreover, a private concern has expressed interest in buying and managing the remainder of the federally owned Level I control towers.

In contrast to the United States, Great Britain implemented a system in 1972 which encouraged widespread use of the private sector in managing various airspace functions. A private company now competes with a governmental body in the training of air traffic controllers. Airports in Great Britain contract with this company or with the government to supply their air traffic control needs. The largest British airports charge variable landing fees and use these revenues to finance airport growth. In this way, local British airports can respond directly to changes in demands for their facilities.

Two main themes underlie these proposals to reorganize the air traffic control system. The first relates to the value of separating safety regulation from the provision of air traffic services. While the two activities are linked, the Federal Government may not be in the best position to implement policies that ease congestion. The second is that user fees directly related to services are necessary to understand more clearly the level of services needed now and in the future. Only with a pricing system that allows operators and air travelers to register the extent to which they value various services will it be possible to plan sensibly for the needs of the future. Moreover, this pricing system can be used to generate the revenues needed to improve the system.

CONCERNS ABOUT MARKET ORGANIZATION AND MONOPOLY

Deregulation has led to greater price competition, lower average fares for travelers, and a more efficient industry structure. The evidence suggests that the industry is much more competitive now than under regulation, and that attempts to reregulate would produce substantial net losses for both consumers and the airline industry. Nonetheless, concern has been voiced that the emerging industry structure is oligopolistic in character, allowing firms to exert substantial control over various markets. Four specific issues have been raised. First, the viability of new entrants and smaller carriers in the deregulated marketplace has been a source of concern. Second, the growth of particular airlines at hub airports, along with some recent mergers, have raised questions about consolidation in the industry. Third, since information about flights and fares has become more important in airline competition, the influence of airline-owned computerized reservation systems used by travel agents has come under scrutiny. Fourth, by making entry more difficult, capacity limitations set on airport usage may pose a threat to competition.

THE VIABILITY OF NEW ENTRANTS AND SMALLER AIRLINES

Deregulation has radically transformed the organization of the airline industry. Freedom of entry has played an important role in this change. Under regulation, the existing interstate airlines were protected against new entry. The number of carriers gradually dwindled until 1978, when there were only 36 certificated airline operators left.

Since deregulation many new airlines have emerged. More than 200 firms have been certified since 1978. As in any dynamic industry, some firms have failed, some have merged, and others have grown on their own. As of July 1987 there were 78 certificated airline carriers, although nearly one-half operated outside of the continental United States. More than three-fourths of carriers flying today received their certification following deregulation.

There was some initial concern that smaller carriers would have difficulty entering the industry to compete against large incumbents. Studies indicated that larger airlines had lower costs per seat mile than smaller airlines; however, company size itself was found to confer no advantages on a particular route. The differences instead were found to be attributable to the different types of service offered by large trunks and local carriers. Smaller airlines tended to make shorter flights with smaller planes than the major carriers. Bigger planes flying longer distances operated at lower costs per seat mile. In other words, there appear to be economies of scale in aircraft size and usage, but not necessarily in overall airline size.

The evolution of airline operations toward hub-and-spoke systems following deregulation, however, may provide some advantages to larger airlines. The ability of a single airline to offer a variety of routes at convenient departure times may be valuable to prospective passengers. Carriers may be able to use their aircraft more efficiently by having multiple hubs rather than a single hub. The economics of disseminating fare information and using this information for developing fare structures also may favor larger firms.

Since deregulation the success of local and regional airlines has helped to relieve concerns about the viability of smaller airlines coexisting with the trunks. Local and regional carriers have enjoyed greater profitability than the large trunk airlines. The common stock of small carriers has performed better than stocks of the larger airlines. Furthermore, many smaller airlines have found market niches, in which they have prospered, such as feeder services to larger carriers or connections between less densely populated areas.

New entrants generally have enjoyed cost advantages over the established airlines. The employment contracts and management organization developed under regulation were not compatible with a deregulated environment. New carriers have been able to achieve lower labor costs and improved utilization of equipment. The established airlines have responded to the competitive pressure by reducing operating costs, thereby mitigating the advantages of entrants.

MERGERS AND CONSOLIDATION AT HUBS

In order to coordinate and consolidate traffic in a hubbing network, a carrier must have a large number of flights at its hub airports. Naturally, as an airline routes more of its traffic through its hubs, its share of flights at those airports will grow. Thus some increase in airline concentration at individual airports is a consequence of building an efficient route structure.

Airline hub-and-spoke networks have expanded in two ways: through internal growth by offering more flights and leasing more gate space; and through mergers of existing airlines. Expanding the reach of an airline's network by adding new hub locations and spoke routes affords more opportunities for single-line travel.

Yet expansion of a carrier at an existing hub, through the merger of two airlines' operations at a particular airport, has raised concerns that firms may be able to exert market power. Potential anti-competitive problems from mergers can be addressed through normal antitrust review. The application of the antitrust laws to the airline industry is not an issue of deregulation *per se*, but a matter of general competitive policy.

Changes in airline organization and operation that cause traffic at a hub airport to be concentrated in the hands of one or two airlines do not, by themselves, reveal much about the competitive level in the industry. Where barriers to entry are low and alternatives are available, the benefits of competition can be achieved regardless of airline concentration or the actual number of competitors in a market. Where those conditions do not hold, conclusions about the vigor of competition must be drawn with more caution. Thus the potential impediments to competition must be analyzed in order to evaluate the consequences of consolidation in the airline industry.

At hubs where one or two carriers already use a large share of the gate space, another airline may find it difficult to establish a major presence there. The relevant statistic, however, may not be the concentration at the individual airport. Competition among hubs at different locations provides a significant disciplinary force. The hub airports in one carrier's system are the spoke airports of other carriers' systems. If travelers living near a concentrated hub become dissatisfied with the fare and service of the dominant carrier(s), they often have the option of taking another airline to its hub and flying to their destinations from there.

For long journeys passengers can choose among a number of hubs in order to reach their destination. A traveler from Boston to Phoenix, for example, can choose among nine connecting points, including Chicago, Kansas City, and St. Louis. Many hubs have been created since deregulation, and airlines are continuing to add new hubs to their systems, such as Charlotte, Cincinnati, Dayton, Philadelphia, and Raleigh-Durham. In addition, metropolitan areas with multiple airports may experience competition among them, since an attempt by an airline to raise its fares at one airport may be disciplined by travelers switching to an airline at another airport.

Competitive conditions for shorter flights are different from those for longer ones. Interhub competition is most effective for the longer flights. On shorter routes flying through an out-of-the-way hub to arrive at one's ultimate destination may not be a feasible alternative. For example, flying from Minneapolis to Madison via Chicago may not be a very good substitute for a nonstop flight from Minneapolis to Madison. On thinly traveled shorter routes, service from small commuter airlines may provide alternatives to the dominant carriers feeding into the hub. For shorter distances surface transportation, such as cars, buses, and trains, may provide a viable alternative means of travel.

On routes where reasonable alternatives are quite limited, there have been complaints of monopoly pricing. These cases often involve markets with small traffic volume that can accommodate only single plane scheduled service. In some cases, regular air service to small communities is feasible only as a result of pooling passengers, which is made possible by the existence of a hub into which traffic from small communities can feed. A policy that would weaken the hubbing structure also would reduce the network economies available from careful route coordination. Such a policy could result in the denial of air service to these communities altogether.

Recent research has found that fares tend to be higher on routes on which there are fewer competitors. Yet it is not clear if increases in concentration actually imply higher prices. Moreover, even if this were true, if travelers paying these higher prices received higher quality service, they could be better off. More research will be necessary to determine how specific changes in industry concentration have affected consumer welfare.

While the concentration of major carriers at the national level and at some hubs has increased recently, it is not clear that concentration has risen in the economically relevant markets, namely, individual city-pair markets. Easier entry into these markets appears to have brought more airlines into competition on more routes. Preliminary research suggests that the average number of carriers per route is higher today than it was under regulation.

COMPUTERIZED RESERVATION SYSTEMS

The development of computerized reservation systems (CRS) by a few airlines has been pointed to as a danger to free competition among the airlines. Prior to CRS most travel agents would look up flights and fares in the *Official Airline Guide*. Then they would call each airline individually to check seat and fare availability. CRS provides an up-to-date listing of flights, fares, and seat availability on a terminal screen. Reservations, seat assignments, and ticket purchases then can be made by computer.

The initial plans to develop a computerized system of reservations and flight information dates back to 1953. Technical difficulties in implementation were formidable. The data processing requirements stretched the limits of existing computer hardware and software. In the late 1960s and early 1970s, attempts were made to develop a common system for airlines and travel agents. After an industry-wide effort to develop a CRS broke down in the early 1970s, two airlines invested heavily to develop and market their own systems. The success of these systems spurred others to enter, and now three other domestic airline-owned systems compete for travel agents.

While CRS was developed prior to deregulation, it is well-suited to a market environment in which prices are changing constantly. The key benefit provided by CRS is information. The development of the hub-and-spoke structure has made finding convenient connections extremely important. While fare structures have grown more complex, CRS allows prices, schedules, and routes to be accessed and conveyed to the traveler in an inexpensive and timely manner.

CRS also has played an important role in managing the information that enables airlines to offer deep discount fares. The airlines themselves had to develop sophisticated techniques for monitoring the inventory of seats on their flights in order to plan their route structure and thus to use their aircraft efficiently. CRS has helped contribute to the rapid advances in the management and productivity of the U.S. airline industry.

Because CRS provides airlines with the ability to react quickly, change their fares, and disseminate information, it functions as an important marketing and advertising tool. The order in which the offerings appear on the travel agent's computer screen, however, has been a point of controversy. The owner-developer of each system initially listed its own flights first and permitted others to purchase preferential placement on the screen.

There are two sides to the CRS market. CRS owners negotiate with travel agents to use their services. They also negotiate with other airlines to list their flights on a particular CRS.

Since entry into the travel agency business is unrestricted, agents compete with each other to offer the best service to their customers. Thus travel agents will choose a system that best helps them to increase earnings, so CRS services and screen presentations are developed to suit their demands and those of their customers.

Airlines purchasing CRS services argued it was unfair for CRS owners to charge airlines different prices for their booking services. In response to these concerns, the CAB required CRS owners to charge the same price for all airline bookings. Whether in fact CRS prices could be anticompetitive is a matter that currently is being litigated.

Airlines without their own CRS have complained that the preferential placement of the CRS owner's information puts the non-owners at a competitive disadvantage. Just before its demise, the Civil Aeronautics Board issued an order requiring nondiscriminatory flight listings on a CRS. This order effectively limited the options available to CRS owners in listing flights on the computer screen. There has been vigorous debate over the desirability of the rule. Proponents argue that the airlines that owned CRS systems have been able to capture excessive profits as a result of having access to all the information in a CRS system. Opponents argue that the government's attempt to regulate screen display places an unnecessary restraint on competition and that the potential to exercise monopoly power is limited by the existence of several firms that currently offer CRS services.

AIRPORT CAPACITY LIMITS

Capacity constraints can present obstacles to entry and competition. Setting well-defined limits on airport landings and takeoffs could reduce delays. The price of such a measure, however, could be a weakening of competition, since a major disciplinary force in the airline market is the threat of entry by another carrier. The working of competitive forces could be compromised significantly by capacity restrictions that make it more difficult for carriers to expand service at an airport.

The difficulties generated by capacity limitations may be eased through the introduction of appropriate market incentives. When there are such constraints, the allocation method for these limited landing rights has important competitive consequences. Without flexibility to reallocate the slots among rival airlines, those airlines holding the slots are protected against the entry of other carriers. If these slots were tradable, however, new airlines could bid for slots and enter the market. In this way, some of the cartelizing effects of capacity limits could be mitigated.

Regardless of whether the landing and takeoff rights are tradable or not, the setting of capacity limits may create incentives that could result in airline operators being reluctant to have the airport expand in the future. Airlines holding slots could have an incentive to oppose an increase in the capacity of the airport because such expansion would lower the value of the slots. Thus temporary capacity constraints could turn into long-term limits on capacity growth. A very similar situation has arisen with the issuance of taxi medallions in major cities. The number of authorized taxis in many cities today was set many years ago. There has been much reluctance, even in the face of consumer dissatisfaction, to augment the number of medallions. Taxi owners argue the local authority would be acting improperly if it took actions to diminish the value of the taxi owners' existing assets.

The structure of contracts between airports and airlines also may provide some incentives to slow capacity expansion. Airlines play an important role in determining capacity changes at airports. Airports typically are operated by local authorities, and airport construction usually is financed through the issue of revenue bonds. In order to assure a stream of revenue to support the bond issue, the airport authority signs long-term leases with the airlines for the use of the airport facilities. In return for long-term commitments, as is common in similar long-term agreements, the airlines receive some voice in future capital investments at the airport. These lease contracts typically grant to the airlines leasing a majority of the facilities the power to veto major airport alterations and capital improvements.

There have been some complaints that the current operation of slot markets has not been fully effective in allocating landing rights efficiently, and periodic lotteries and auctions have been suggested as a remedy. At the four slot-constrained airports, the FAA can take back a certain percentage of slots from the incumbent airlines and hold a lottery in which new entrants and smaller carriers have a greater chance of winning slots than the larger incumbent airlines. While this procedure may facilitate entry by new carriers, it does so in an inefficient manner. The slots are not allocated by a price mechanism; they are distributed arbitrarily. The careful coordination of incoming and outgoing flights is extremely important for effective route planning. Taking slots from existing hub-and-spoke operations and reallocating them without regard to route structure does not promote airline efficiency.

An alternative allocation mechanism to those involving explicit capacity limits is variable landing and usage fees. Such fees would allow the number of operators who can choose to land during a period to vary, subject to safety considerations. Instead of setting a predetermined limit on takeoffs and landings, changes in technology, airport staffing, and airway management then can be used to augment capacity at points of peak demand.

The effective limit will be determined by the demand for airspace at the specified fee. A variable fee structure avoids the incentives for airlines to be opposed to capacity growth. The airlines will prefer lower fees at peak periods, so they will desire an increase in airport capacity, as mentioned above. The use of variable fees also allows the airport to observe demand at different prices for different time periods. Moving toward variable landing and usage fees may help to avoid potential threats to competition posed by capacity limits and to foster capacity expansion.

CONCLUSION

The passage of the Airline Deregulation Act of 1978 has led to substantial gains, both for the airline industry and the general public. Productivity within the industry has improved, air fares have declined on average, and airlines are providing more frequent service. The total social benefits resulting from airline deregulation during the last decade are estimated to be on the order of $100 billion.

The U.S. experience with deregulation is beginning to have an impact on the way other countries manage air travel. Several countries are following the lead of the United States in relaxing price and entry regulation, thereby enhancing the efficiency of the world's transportation system. Changes designed to reduce barriers to international competition would be the next step. An opening of all markets would bring benefits to travelers, airlines, and the global economy.

One of the principal benefits of deregulation has been to make air travel available to many Americans who would not even have considered this transportation option 10 years ago. The rapid growth of air travel has, however, strained the limits of the air traffic system in some areas. The Airline Deregulation Act eased entry constraints and promoted greater competition among airlines, but it did not foresee the changes that would be needed to accommodate a revitalized airline industry.

To make the system more responsive to future changes, it might be helpful to introduce variable landing and takeoff fees at airports. Revenues from the fees then could be used to enhance the capacity of the system. It is time to reexamine how planning decisions are made, with an eye toward developing market-based approaches that are better suited to meeting the needs of air travelers. The introduction of such changes is the key to increasing the benefits from airline deregulation.

Appendix A

REPORT TO THE PRESIDENT ON THE ACTIVITIES OF THE COUNCIL OF ECONOMIC ADVISERS DURING 1987

LETTER OF TRANSMITTAL

COUNCIL OF ECONOMIC ADVISERS,
Washington, D.C., December 31, 1987.

MR. PRESIDENT:

The Council of Economic Advisers submits this report on its activities during the calendar year 1987 in accordance with section 10(d) of the Employment Act of 1946 as amended by the Full Employment and Balanced Growth Act of 1978.

Sincerely,

Beryl W. Sprinkel, *Chairman*
Thomas Gale Moore, *Member*
Michael L. Mussa, *Member*

Council Members and their Dates of Service

Name	Position	Oath of office date	Separation date
Edwin G. Nourse	Chairman	August 9, 1946	November 1, 1949.
Leon H. Keyserling	Vice Chairman	August 9, 1946	
	Acting Chairman	November 2, 1949	
	Chairman	May 10, 1950	January 20, 1953.
John D. Clark	Member	August 9, 1946	
	Vice Chairman	May 10, 1950	February 11, 1953.
Roy Blough	Member	June 29, 1950	August 20, 1952.
Robert C. Turner	Member	September 8, 1952	January 20, 1953.
Arthur F. Burns	Chairman	March 19, 1953	December 1, 1956.
Neil H. Jacoby	Member	September 15, 1953	February 9, 1955.
Walter W. Stewart	Member	December 2, 1953	April 29, 1955.
Raymond J. Saulnier	Member	April 4, 1955	
	Chairman	December 3, 1956	January 20, 1961.
Joseph S. Davis	Member	May 2, 1955	October 31, 1958.
Paul W. McCracken	Member	December 3, 1956	January 31, 1959.
Karl Brandt	Member	November 1, 1958	January 20, 1961.
Henry C. Wallich	Member	May 7, 1959	January 20, 1961.
Walter W. Heller	Chairman	January 29, 1961	November 15, 1964.
James Tobin	Member	January 29, 1961	July 31, 1962.
Kermit Gordon	Member	January 29, 1961	December 27, 1962.
Gardner Ackley	Member	August 3, 1962	
	Chairman	November 16, 1964	February 15, 1968.
John P. Lewis	Member	May 17, 1963	August 31, 1964.
Otto Eckstein	Member	September 2, 1964	February 1, 1966.
Arthur M. Okun	Member	November 16, 1964	
	Chairman	February 15, 1968	January 20, 1969.
James S. Duesenberry	Member	February 2, 1966	June 30, 1968.
Merton J. Peck	Member	February 15, 1968	January 20, 1969.
Warren L. Smith	Member	July 1, 1968	January 20, 1969.
Paul W. McCracken	Chairman	February 4, 1969	December 31, 1971.
Hendrik S. Houthakker	Member	February 4, 1969	July 15, 1971.
Herbert Stein	Member	February 4, 1969	
	Chairman	January 1, 1972	August 31, 1974.
Ezra Solomon	Member	September 9, 1971	March 26, 1973.
Marina v.N. Whitman	Member	March 13, 1972	August 15, 1973.
Gary L. Seevers	Member	July 23, 1973	April 15, 1975.
William J. Fellner	Member	October 31, 1973	February 25, 1975.
Alan Greenspan	Chairman	September 4, 1974	January 20, 1977.
Paul W. MacAvoy	Member	June 13, 1975	November 15, 1976.
Burton G. Malkiel	Member	July 22, 1975	January 20, 1977.
Charles L. Schultze	Chairman	January 22, 1977	January 20, 1981.
William D. Nordhaus	Member	March 18, 1977	February 4, 1979.
Lyle E. Gramley	Member	March 18, 1977	May 27, 1980.
George C. Eads	Member	June 6, 1979	January 20, 1981.
Stephen M. Goldfeld	Member	August 20, 1980	January 20, 1981.
Murray L. Weidenbaum	Chairman	February 27, 1981	August 25, 1982.
William A. Niskanen	Member	June 12, 1981	March 30, 1985.
Jerry L. Jordan	Member	July 14, 1981	July 31, 1982.
Martin Feldstein	Chairman	October 14, 1982	July 10, 1984.
William Poole	Member	December 10, 1982	January 20, 1985.
Beryl W. Sprinkel	Chairman	April 18, 1985	
Thomas Gale Moore	Member	July 1, 1985	
Michael L. Mussa	Member	August 18, 1986	

Report to the President on the Activities of the Council of Economic Advisers During 1987

The Council of Economic Advisers was established by the Employment Act of 1946 to provide economic analysis and advice to the President and thus to assist in the development and implementation of national economic policies. The Council also advises the President on other matters affecting the health and performance of the Nation's economy.

Beryl W. Sprinkel, Thomas Gale Moore, and Michael L. Mussa continued to serve as Council Members in 1987, with Dr. Sprinkel as Chairman.

MACROECONOMIC POLICIES

As is its tradition, the Council devoted much of its time during 1987 to assisting the President in formulating economic policy objectives and designing programs to achieve them. In this regard, the Chairman kept the President informed of important macroeconomic developments and advised the President and senior Administration officials on major policy issues. Briefings were conducted on a variety of domestic issues, especially the economic outlook, and on international issues, especially in preparation for the Venice Economic Summit.

The Council chaired an interagency forecasting group, that also included the Department of the Treasury and the Office of Management and Budget. The forecasting group developed economic projections that were presented to the President and used in the Federal budget. The Council also participated actively in discussions of macroeconomic policy issues within the Administration, in conjunction with outside agencies, and with international organizations. The Council testified before the Congress several times on the economic outlook and on the conduct of monetary policy.

The Chairman of the Council continued to serve as the Chairman of the Economic Policy Committee (EPC) of the Organization for Economic Cooperation and Development (OECD). Through its participation in other OECD committees and meetings, the Council continued to analyze a number of economic policy issues, including macroeconomic performance in a multinational context, problems of international policy coordination and payments imbalances, and barriers to economic development and structural adjustment. During the year, the Chairman led discussions on structural adjustment at the EPC. The Chairman also represented the EPC at the Ministerial Meeting where the EPC's recommendations on structural reform were adopted.

MICROECONOMIC POLICIES

A wide variety of microeconomic issues received Council attention during the year. The Council actively participated in the Cabinet-level Domestic Policy Council and Economic Policy Council, which addressed a number of issues, including: stratospheric ozone, which resulted in an international agreement on controlling and reducing chlorofluorocarbon emissions; international trade policy, which culminated in the signing of a Free-Trade Agreement with Canada; and agricultural policy, which led to the U.S. proposal under the General Agreement on Tariffs and Trade to abolish all distortionary subsidies for and barriers to agricultural products. The Council also continued its membership on the Vice President's Task Force on Regulatory Relief; its membership on the interagency working groups on acid rain, energy security, health policy, research and development policy including superconductivity, alternative fuels, antipoverty policies, the Pension Benefit Guaranty Corporation and steel pensions, and farm credit. The Council retained its chairmanship of the Working Group on Privatization, and began chairing the Working Group on Corporate Sentencing. The Council also devoted a great deal of attention to issues considered by the interagency Trade Policy Review Group, including: intellectual property rights, textile and apparel trade, competitiveness initiatives, Generalized System of Preferences, and a number of Section 301 cases dealing with foreign trade practices and market-opening initiatives.

The Council testified before the Congress on mandated health benefits, corporate control issues, and agricultural policy reform. The Council also participated actively in various OECD fora, working on a variety of issues, including the economic effects of agricultural policies and tax policies.

PUBLIC INFORMATION

The Council's *Annual Report* is the principal medium through which the Council informs the public of its work and its views. It is also an important vehicle for presenting the Administration's domestic and international economic policies. Annual distribution of the *Report* in recent years has averaged about 50,000 copies. The Council also assumes primary responsibility for the monthly *Economic Indicators*, which is issued by the Joint Economic Committee of the Congress and has a distribution of approximately 10,000. Information also is provided to the public through speeches, testimony, and other public appearances by the Council Chairman, Members, and senior staff.

ORGANIZATION AND STAFF OF THE COUNCIL

OFFICE OF THE CHAIRMAN

The Chairman is responsible for communicating the Council's views to the President through personal discussions and written reports on economic developments. The Chairman also represents the Council at Cabinet meetings, meetings of the Economic Policy Council and the Domestic Policy Council, daily White House senior staff meetings, weekly issues lunches with the President, and many other formal and informal meetings with the President, senior White House staff, and other senior government officials. The Chairman guides and oversees the work of the Council and exercises ultimate responsibility for directing the work of the Members and the professional staff. This year, the Chairman was elevated to Cabinet rank.

COUNCIL MEMBERS

Members of the Council are involved in the full range of issues within the Council's purview, and they are responsible for supervising the daily work of the professional staff. Members represent the Council at a wide variety of interagency and international meetings and assume major responsibility for selecting issues for Council attention.

The small size of the Council permits the Council Chairman and Members to work as a team on most policy issues. There continued to be, however, an informal division of subject matter. Dr. Mussa has been primarily responsible for domestic and international macroeconomic analysis and economic projections. Dr. Moore has been primarily responsible for microeconomic and sectoral analysis and regulatory issues.

PROFESSIONAL STAFF

The professional staff of the Council consists of the Special Assistant, the Senior Statistician, 10 senior staff economists, 6 junior staff economists, and 1 research assistant. The professional staff and their respective areas of concentration at the end of 1987 were:

Special Assistant to the Chairman

Margot E. Machol

Senior Staff Economists

Deborah J. Danker	Macroeconomics, Money, and Finance
Earl L. Grinols	International Macroeconomics and Trade
Robert W. Hahn	Energy, Transportation, Environment, and Regulation
Craig S. Hakkio	International Macroeconomics
Arlene S. Holen	Labor, Health, and Regulation
Robert J. LaLonde	Macroeconomics and Labor
J. Steven Landefeld	Macroeconomics and Taxation
Thomas A. Smith	Law and Economics
Daniel A. Sumner	Agriculture and Labor
Peter M. Taylor	Macroeconomics and Forecasting

Statistician

Catherine H. Furlong	Senior Statistician

Junior Staff Economists

Peter H. Barlerin	International Macroeconomics and Trade
Lesley A. Cameron	Macroeconomics and International Finance
Andrew J. Filardo	Macroeconomics and Finance
Julie Ann Hewitt	Microeconomics, Agriculture, and Environment
Randall S. Kroszner	Industrial Organization, Regulation, and Finance
Scott Schuh	International and Labor Macroeconomics

Research Assistant

William A. Teichner	Macroeconomics and Forecasting

Mrs. Furlong manages the Statistical Office assisted by Natalie V. Rentfro, Linda A. Reilly, and Deborah D. Miller. They administer the Council's statistical information system, overseeing the publication of *Economic Indicators* and the statistical appendix to the *Economic Report*, as well as the verification of statistics in memoranda, testimony, and speeches.

Thomas L. Super, from the Environmental Protection Agency, provided editorial assistance in the preparation of the 1988 *Economic Report*.

Four former staff members returned to assist in the preparation of the 1988 *Report*: Richard H. Clarida (senior staff economist), John J. Dziak (research assistant), Lorraine A. Ambrosio (administrative aide), and Dorothy Bagovich (statistical assistant). H. Hague Ollison (Georgetown University), Jana C. Stull (Nebraska Wesleyan University), and Ellen H. Zimmerman (Johns Hopkins University) joined the staff in early 1988 as student interns for the winter semester.

SUPPORTING STAFF

The Administrative Office, which provides general support for the Council's activities, consists of Elizabeth A. Kaminski, Staff Assistant to the Council, and Catherine Fibich, Administrative Assistant.

The secretaries for the Council of Economic Advisers during 1987 were Lisa D. Branch, Gerardo Garcia, Mary E. Jones, Sandra F. Medwid, Francine P. Obermiller, Margaret L. Snyder, Suzanne M. Tudor, and Alice H. Williams.

DEPARTURES

The Council's senior staff economists, in most cases, are on leave of absence from faculty positions at academic institutions, or are from other government agencies or research institutions. Their tenure with the Council is usually limited to 1 or 2 years. Many of the senior staff economists who resigned during the year returned to their previous affiliations. They are: Richard H. Clarida (Yale University), Stephen J. DeCanio (University of California, Santa Barbara), Steven L. Husted (University of Pittsburgh), Randall P. Mariger (University of Washington), Aline O. Quester (Center for Naval Analyses), and Gordon C. Rausser (University of California, Berkeley). Others went on to new positions. They are: J. David Germany (Morgan Stanley & Co., Inc.), Carol A. Leisenring (Philadelphia National Bank), J. Gregory Sidak (Federal Communications Commission), and Susan E. Woodward (Department of Housing and Urban Development).

Staff economists usually have just completed their dissertations and spend 1 year at the Council as additional preparation for their professional careers. Staff economists who took new positions are: Edward T. Gullason (University of Hartford) and Ellen L. Hughes-Cromwick (Trinity College). Junior staff economists generally are graduate students who spend 1 year with the Council and then return to complete their dissertations. Those who returned to their graduate studies in 1987 are: Douglas A. Irwin (Columbia University) and Marjorie B. Rose (University of California, Los Angeles). Junior economists who went on to new positions are: Diana E. Furchtgott-Roth (American Petroleum Institute) and Darrell L. Williams (Securities and Exchange Commission). After graduating from the University of Chicago, Lisa E. Bernstein spent a year at the Council as a research assistant and has now begun studies at Harvard Law School.

In addition, a number of other staff provided support to the Council during the year. David K. Carlson (now at Goldman, Sachs & Co.) continued to serve as an intern through the first half of 1987 while he was completing his studies at the University of Maryland, and John J. Dziak (University of Chicago, Graduate School of Business) served as a research assistant during the summer of 1987. Hannah R. Hopkins served as a student aide during the summer of 1987.

Support staff who resigned in 1987 were Bonnie D. Brown, Audrey L. Carlson, and Sheila J. Moat.

Appendix B

STATISTICAL TABLES RELATING TO INCOME, EMPLOYMENT, AND PRODUCTION

CONTENTS

NATIONAL INCOME OR EXPENDITURE:

Page

B-1. Gross national product, 1929-87 248
B-2. Gross national product in 1982 dollars, 1929-87 250
B-3. Implicit price deflators for gross national product, 1929-87 252
B-4. Fixed-weighted price indexes for gross national product, 1982 weights, 1959-87 254
B-5. Changes in gross national product, personal consumption expenditures, and related price measures, 1933-87 255
B-6. Gross national product by major type of product, 1929-87 256
B-7. Gross national product by major type of product in 1982 dollars, 1929-87 257
B-8. Gross national product by sector, 1929-87 258
B-9. Gross national product by sector in 1982 dollars, 1929-87 259
B-10. Gross national product by industry, 1947-86 260
B-11. Gross national product by industry in 1982 dollars, 1947-86 261
B-12. Gross domestic product of nonfinancial corporate business, 1929-87 262
B-13. Output, costs, and profits of nonfinancial corporate business, 1948-87 263
B-14. Personal consumption expenditures, 1940-87 264
B-15. Personal consumption expenditures in 1982 dollars, 1940-87 265
B-16. Gross and net private domestic investment, 1929-87 266
B-17. Gross and net private domestic investment in 1982 dollars, 1929-87 267
B-18. Inventories and final sales of business, 1946-87 268
B-19. Inventories and final sales of business in 1982 dollars, 1947-87 269
B-20. Foreign transactions in the national income and product accounts, 1929-87 270
B-21. Exports and imports of goods and services in 1982 dollars, 1929-87 271
B-22. Relation of gross national product, net national product, and national income, 1929-87 272
B-23. Relation of national income and personal income, 1929-87 273
B-24. National income by type of income, 1929-87 274
B-25. Sources of personal income, 1929-87 276
B-26. Disposition of personal income, 1929-87 278
B-27. Total and per capita disposable personal income and personal consumption expenditures in current and 1982 dollars, 1929-87 279
B-28. Gross saving and investment, 1929-87 280
B-29. Saving by individuals, 1946-87 281
B-30. Number and median income (in 1986 dollars) of families and persons, and poverty status, by race, selected years, 1963-86 282

POPULATION, EMPLOYMENT, WAGES, AND PRODUCTIVITY:

Page
B-31. Population by age groups, 1929-87 283
B-32. Population and the labor force, 1929-87 284
B-33. Civilian employment and unemployment by sex and age, 1947-87 .. 286
B-34. Civilian employment by demographic characteristic, 1954-87 287
B-35. Civilian unemployment by demographic characteristic, 1954-87 288
B-36. Labor force participation rate and employment/population ratio, 1948-87 289
B-37. Civilian labor force participation rate by demographic characteristic, 1954-87 290
B-38. Civilian employment/population ratio by demographic characteristic, 1954-87 291
B-39. Unemployment rate, 1948-87 292
B-40. Civilian unemployment rate by demographic characteristic, 1948-87 293
B-41. Unemployment by duration and reason, 1947-87 294
B-42. Unemployment insurance programs, selected data, 1955-87 295
B-43. Employees on nonagricultural payrolls, by major industry, 1946-87 296
B-44. Average weekly hours and hourly earnings in selected private nonagricultural industries, 1947-87 298
B-45. Average weekly earnings in selected private nonagricultural industries, 1947-87 299
B-46. Productivity and related data, business sector, 1947-87 300
B-47. Changes in productivity and related data, business sector, 1948-87. 301

PRODUCTION AND BUSINESS ACTIVITY:

B-48. Industrial production indexes, major industry divisions, 1939-87 302
B-49. Industrial production indexes, market groupings, 1947-87 303
B-50. Industrial production indexes, selected manufactures, 1947-87 304
B-51. Capacity utilization rates, 1948-87 305
B-52. New construction activity, 1929-87 306
B-53. New housing units started and authorized, 1959-87 308
B-54. Business expenditures for new plant and equipment, 1947-88 309
B-55. Manufacturing and trade, sales and inventories, 1948-87 310
B-56. Manufacturers' shipments and inventories, 1947-87 311
B-57. Manufacturers' new and unfilled orders, 1947-87 312

PRICES:

B-58. Consumer price indexes, major expenditure classes, 1946-87 313
B-59. Consumer price indexes, selected expenditure classes, 1946-87 314
B-60. Consumer price indexes, commodities, services, and special groups, 1946-87 316
B-61. Changes in special consumer price indexes, 1958-87 317
B-62. Changes in consumer price indexes, commodities and services, 1929-87 318
B-63. Producer price indexes by stage of processing, 1947-87 319
B-64. Producer price indexes by stage of processing, special groups, 1974-87 321
B-65. Producer price indexes for major commodity groups, 1947-87 322
B-66. Changes in producer price indexes for finished goods, 1955-87 324

MONEY STOCK, CREDIT, AND FINANCE:

Page

B-67. Money stock, liquid assets, and debt measures, 1959–87 325
B-68. Components of money stock measures and liquid assets, 1959–87... 326
B-69. Aggregate reserves of depository institutions and monetary base, 1959–87 328
B-70. Commercial bank loans and securities, 1972–87 329
B-71. Bond yields and interest rates, 1929–87 330
B-72. Total funds raised in credit markets by nonfinancial sectors, 1978–87 332
B-73. Mortgage debt outstanding by type of property and of financing, 1939–87 334
B-74. Mortgage debt outstanding by holder, 1939–87 335
B-75. Consumer credit outstanding, 1950–87 336

GOVERNMENT FINANCE:

B-76. Federal receipts, outlays, surplus or deficit, and debt, selected fiscal years, 1929–89 337
B-77. Federal receipts, outlays, and debt, fiscal years 1980–89 338
B-78. Relation of Federal Government receipts and expenditures in the national income and product accounts to the budget, fiscal years 1987–89 340
B-79. Federal and State and local government receipts and expenditures, national income and product accounts, 1929–87 341
B-80. Federal and State and local government receipts and expenditures, national income and product accounts, by major type, 1929–87 ... 342
B-81. Federal Government receipts and expenditures, national income and product accounts, 1966–89 343
B-82. State and local government receipts and expenditures, national income and product accounts, 1946–87 344
B-83. State and local government revenues and expenditures, selected fiscal years, 1927–86 345
B-84. Interest-bearing public debt securities by kind of obligation, 1967–87 346
B-85. Maturity distribution and average length of marketable interest-bearing public debt securities held by private investors, 1967–87. 347
B-86. Estimated ownership of public debt securities, by private investors, 1976–87 348

CORPORATE PROFITS AND FINANCE:

B-87. Corporate profits with inventory valuation and capital consumption adjustments, 1929–87 349
B-88. Corporate profits by industry, 1929–87 350
B-89. Corporate profits of manufacturing industries, 1929–87 351
B-90. Sales, profits, and stockholders' equity, all manufacturing corporations, 1950–87 352
B-91. Relation of profits after taxes to stockholders' equity and to sales, all manufacturing corporations, 1947–87 353
B-92. Sources and uses of funds, nonfarm nonfinancial corporate business, 1946–87 354
B-93. State and municipal and business securities offered, 1940–87 355
B-94. Common stock prices and yields, 1949–87 356
B-95. Business formation and business failures, 1945–87 357

AGRICULTURE:

Page

B-96. Farm income, 1929-87 358
B-97. Farm output and productivity indexes, 1947-86 359
B-98. Farm input use, selected inputs, 1947-86 360
B-99. Indexes of prices received and prices paid by farmers, 1946-87 361
B-100. U.S. exports and imports of agricultural commodities, 1940-87 362
B-101. Balance sheet of the farm sector, 1939-87 363

INTERNATIONAL STATISTICS:

B-102. U.S. international transactions, 1946-87 364
B-103. U.S. merchandise exports and imports by principal end-use category, 1965-87 366
B-104. U.S. merchandise exports and imports by area, 1978-87 367
B-105. U.S. merchandise exports and imports by commodity groups, 1970-87 368
B-106. International investment position of the United States at year-end, 1979-86 369
B-107. International reserves, selected years, 1952-87 370
B-108. Foreign exchange rates, 1967-87 371
B-109. Industrial production and consumer prices, major industrial countries, 1962-87 372
B-110. Civilian unemployment rate, and hourly compensation, major industrial countries, 1960-87 373
B-111. Growth rates in real gross national product, 1961-87 374

General Notes

Detail in these tables may not add to totals because of rounding.

Unless otherwise noted, all dollar figures are in current dollars.

Symbols used:

^{p} Preliminary.

— —Not available (also, not applicable).

Data in these tables reflect revisions made by the source agencies during 1987 and early 1988.

NATIONAL INCOME OR EXPENDITURE

TABLE B–1.—*Gross national product, 1929–87*

[Billions of dollars, except as noted; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross national product	Personal consumption expenditures				Gross private domestic investment						
		Total	Durable goods	Nondurable goods	Services	Total	Fixed investment					Change in business inventories
							Total	Nonresidential			Residential	
								Total	Structures	Producers' durable equipment		
1929	103.9	77.3	9.2	37.7	30.4	16.7	14.9	11.0	5.5	5.5	4.0	1.7
1933	56.0	45.8	3.5	22.3	20.1	1.6	3.1	2.5	1.1	1.4	.6	−1.6
1939	91.3	67.0	6.7	35.1	25.2	9.5	9.1	6.1	2.2	3.9	3.0	.4
1940	100.4	71.0	7.8	37.0	26.2	13.4	11.2	7.7	2.6	5.2	3.5	2.2
1941	125.5	80.8	9.7	42.9	28.3	18.3	13.8	9.7	3.3	6.4	4.1	4.5
1942	159.0	88.6	6.9	50.8	31.0	10.3	8.5	6.3	2.2	4.1	2.2	1.8
1943	192.7	99.5	6.5	58.6	34.3	6.2	6.9	5.4	1.8	3.7	1.4	−.6
1944	211.4	108.2	6.7	64.3	37.2	7.7	8.7	7.4	2.4	5.0	1.4	−1.0
1945	213.4	119.6	8.0	71.9	39.7	11.3	12.3	10.6	3.3	7.3	1.7	−1.0
1946	212.4	143.9	15.8	82.7	45.4	31.5	25.1	17.3	7.4	9.9	7.8	6.4
1947	235.2	161.9	20.4	90.9	50.6	35.0	35.5	23.5	8.1	15.3	12.1	−.5
1948	261.6	174.9	22.9	96.6	55.5	47.1	42.4	26.8	9.5	17.3	15.6	4.7
1949	260.4	178.3	25.0	94.9	58.4	36.5	39.5	24.9	9.2	15.7	14.6	−3.1
1950	288.3	192.1	30.8	98.2	63.2	55.1	48.3	27.8	10.0	17.8	20.5	6.8
1951	333.4	208.1	29.9	109.2	69.0	60.5	50.2	31.8	11.9	19.9	18.4	10.2
1952	351.6	219.1	29.3	114.7	75.1	53.5	50.5	31.9	12.2	19.7	18.6	3.1
1953	371.6	232.6	32.7	117.8	82.1	54.9	54.5	35.1	13.6	21.5	19.4	.4
1954	372.5	239.8	32.1	119.7	88.0	54.1	55.7	34.7	13.9	20.8	21.1	−1.6
1955	405.9	257.9	38.9	124.7	94.3	69.7	64.0	39.0	15.2	23.9	25.0	5.7
1956	428.2	270.6	38.2	130.8	101.6	72.7	68.0	44.5	18.2	26.3	23.5	4.6
1957	451.0	285.3	39.7	137.1	108.5	71.1	69.7	47.5	18.9	28.6	22.2	1.4
1958	456.8	294.6	37.2	141.7	115.7	63.6	65.1	42.4	17.5	24.9	22.7	−1.5
1959	495.8	316.3	42.8	148.5	125.0	80.2	74.4	46.3	18.0	28.3	28.1	5.8
1960	515.3	330.7	43.5	153.2	134.0	78.2	75.1	48.8	19.2	29.7	26.3	3.1
1961	533.8	341.1	41.9	157.4	141.8	77.1	74.7	48.3	19.4	28.9	26.4	2.4
1962	574.6	361.9	47.0	163.8	151.1	87.6	81.5	52.5	20.5	32.1	29.0	6.1
1963	606.9	381.7	51.8	169.4	160.6	93.1	87.3	55.2	20.8	34.4	32.1	5.8
1964	649.8	409.3	56.8	179.7	172.8	99.6	94.2	61.4	22.7	38.7	32.8	5.4
1965	705.1	440.7	63.5	191.9	185.4	116.2	106.2	73.1	27.4	45.8	33.1	9.9
1966	772.0	477.3	68.5	208.5	200.3	128.6	114.4	83.5	30.5	53.0	30.9	14.2
1967	816.4	503.6	70.6	216.9	216.0	125.7	115.4	84.4	30.7	53.7	31.1	10.3
1968	892.7	552.5	81.0	235.0	236.4	137.0	129.1	91.4	32.9	58.5	37.7	7.9
1969	963.9	597.9	86.2	252.2	259.4	153.2	143.4	102.3	37.1	65.2	41.2	9.8
1970	1,015.5	640.0	85.7	270.3	284.0	148.8	145.7	105.2	39.2	66.1	40.5	3.1
1971	1,102.7	691.6	97.6	283.3	310.7	172.5	164.7	109.6	40.9	68.7	55.1	7.8
1972	1,212.8	757.6	111.2	305.1	341.3	202.0	191.5	123.0	44.5	78.5	68.6	10.5
1973	1,359.3	837.2	124.7	339.6	373.0	238.8	219.2	145.9	51.4	94.5	73.3	19.6
1974	1,472.8	916.5	123.8	380.9	411.9	240.8	225.4	160.6	57.0	103.6	64.8	15.4
1975	1,598.4	1,012.8	135.4	416.2	461.2	219.6	225.2	162.9	56.3	106.6	62.3	−5.6
1976	1,782.8	1,129.3	161.5	452.0	515.9	277.7	261.7	180.0	60.1	119.9	81.7	16.0
1977	1,990.5	1,257.2	184.5	490.4	582.3	344.1	322.8	214.2	66.7	147.4	108.6	21.3
1978	2,249.7	1,403.5	205.6	541.8	656.1	416.8	388.2	259.0	81.0	178.0	129.2	28.6
1979	2,508.2	1,566.8	219.0	613.2	734.6	454.8	441.9	302.8	99.5	203.3	139.1	13.0
1980	2,732.0	1,732.6	219.3	681.4	831.9	437.0	445.3	322.8	113.9	208.9	122.5	−8.3
1981	3,052.6	1,915.1	239.9	740.6	934.7	515.5	491.5	369.2	138.5	230.7	122.3	24.0
1982	3,166.0	2,050.7	252.7	771.0	1,027.0	447.3	471.8	366.7	143.3	223.4	105.1	−24.5
1983	3,405.7	2,234.5	289.1	816.7	1,128.7	502.3	509.4	356.9	124.0	232.8	152.5	−7.1
1984	3,772.2	2,430.5	335.5	867.3	1,227.6	664.8	597.1	416.0	141.1	274.9	181.1	67.7
1985	4,010.3	2,629.4	368.7	913.1	1,347.5	641.6	631.6	442.6	152.5	290.1	189.0	10.0
1986	4,235.0	2,799.8	402.4	939.4	1,458.0	671.0	655.2	436.9	137.4	299.5	218.3	15.7
1987 ᵖ	4,486.2	2,966.0	413.9	980.4	1,571.6	716.4	670.6	442.1	134.1	308.0	228.5	45.7
1982: IV	3,212.5	2,117.0	263.8	786.6	1,066.5	409.6	469.5	354.9	137.6	217.3	114.7	−59.9
1983: IV	3,545.8	2,315.8	310.0	837.9	1,167.9	579.8	548.8	383.9	127.4	256.5	164.9	31.0
1984: IV	3,851.8	2,493.4	346.7	879.6	1,267.1	661.8	616.8	435.0	146.6	288.4	181.8	45.0
1985: I	3,921.1	2,549.9	358.2	894.4	1,297.3	638.6	617.3	431.5	150.6	280.8	185.8	21.4
II	3,973.6	2,602.0	362.4	910.4	1,329.2	648.4	629.9	445.6	154.4	291.3	184.3	18.5
III	4,042.0	2,665.4	383.7	918.4	1,363.3	628.6	631.0	442.0	152.9	289.1	189.0	−2.4
IV	4,104.4	2,700.1	370.5	929.3	1,400.3	650.8	648.3	451.5	152.1	299.3	196.8	2.5
1986: I	4,174.4	2,737.9	375.9	936.8	1,425.2	683.4	645.1	440.7	149.6	291.0	204.4	38.3
II	4,211.6	2,765.8	386.4	934.3	1,445.1	679.4	651.9	433.8	135.9	297.9	218.1	27.5
III	4,265.9	2,837.1	427.6	940.0	1,469.5	660.8	657.3	433.5	131.1	302.4	223.8	3.5
IV	4,288.1	2,858.6	419.8	946.3	1,492.4	660.2	666.6	439.7	132.9	306.7	226.9	−6.4
1987: I	4,377.7	2,893.8	396.1	969.9	1,527.7	699.9	648.2	422.8	128.7	294.1	225.4	51.6
II	4,445.1	2,943.7	409.0	982.1	1,552.6	702.6	662.3	434.6	129.7	304.9	227.7	40.3
III	4,524.0	3,011.3	436.8	986.4	1,588.1	707.4	684.5	456.6	137.1	319.5	227.9	22.9
IV ᵖ	4,598.0	3,015.1	413.8	983.4	1,618.0	755.6	687.4	454.3	140.7	313.6	233.1	68.1

See next page for continuation of table.

Table B-1.—*Gross national product, 1929–87*—Continued

[Billions of dollars, except as noted; quarterly data at seasonally adjusted annual rates]

Year or quarter	Net exports of goods and services			Government purchases of goods and services					Final sales	Percent change from preceding period	
					Federal						
	Net exports	Exports	Imports	Total	Total	National defense	Nondefense	State and local		Gross national product	Final sales
1929	1.1	7.1	5.9	8.9	1.5	....	....	7.4	102.2	....	....
1933	.4	2.4	2.1	8.3	2.2	....	....	6.1	57.6	−4.2	−5.5
1939	1.2	4.6	3.4	13.6	5.2	1.3	3.9	8.3	90.9	7.0	5.4
1940	1.8	5.4	3.7	14.2	6.1	2.3	3.9	8.1	98.3	10.0	8.1
1941	1.5	6.1	4.7	25.0	17.0	13.8	3.2	8.0	121.0	25.0	23.2
1942	.2	5.0	4.8	59.9	52.0	49.4	2.6	7.8	157.2	26.6	29.9
1943	−1.9	4.6	6.5	88.9	81.4	79.8	1.6	7.5	193.4	21.2	23.0
1944	−1.7	5.5	7.2	97.1	89.4	87.5	2.0	7.6	212.3	9.7	9.8
1945	−.5	7.4	7.9	83.0	74.8	73.7	1.1	8.2	214.4	.9	1.0
1946	7.8	15.2	7.3	29.1	19.2	16.4	2.8	9.9	206.0	−.5	−3.9
1947	11.9	20.3	8.3	26.4	13.6	10.0	3.6	12.8	235.7	10.8	14.4
1948	7.0	17.5	10.6	32.6	17.3	11.3	6.0	15.3	256.9	11.2	9.0
1949	6.5	16.4	9.8	39.0	21.1	13.9	7.2	18.0	263.4	−.5	2.5
1950	2.2	14.5	12.3	38.8	19.1	14.3	4.7	19.8	281.4	10.7	6.8
1951	4.5	19.8	15.3	60.4	38.6	33.8	4.8	21.8	323.2	15.7	14.8
1952	3.2	19.2	16.0	75.8	52.7	46.2	6.5	23.1	348.6	5.5	7.9
1953	1.3	18.1	16.8	82.8	57.9	49.0	8.9	24.8	371.1	5.7	6.5
1954	2.6	18.8	16.3	76.0	48.4	41.6	6.8	27.7	374.1	.2	.8
1955	3.0	21.1	18.1	75.3	44.9	39.0	6.0	30.3	400.2	9.0	7.0
1956	5.3	25.2	19.9	79.7	46.4	40.7	5.7	33.3	423.6	5.5	5.8
1957	7.3	28.2	20.9	87.3	50.5	44.6	5.9	36.9	449.6	5.3	6.1
1958	3.3	24.4	21.1	95.4	54.5	46.3	8.3	40.8	458.3	1.3	1.9
1959	1.5	25.0	23.5	97.9	54.6	46.4	8.2	43.3	490.0	8.5	6.9
1960	5.9	29.9	24.0	100.6	54.4	45.3	9.2	46.1	512.3	3.9	4.6
1961	7.2	31.1	23.9	108.4	58.2	47.9	10.2	50.2	531.4	3.6	3.7
1962	6.9	33.1	26.2	118.2	64.6	52.1	12.6	53.5	568.5	7.6	7.0
1963	8.2	35.7	27.5	123.8	65.7	51.5	14.2	58.1	601.1	5.6	5.7
1964	10.9	40.5	29.6	130.0	66.4	50.4	16.0	63.5	644.4	7.1	7.2
1965	9.7	42.9	33.2	138.6	68.7	51.0	17.7	69.9	695.2	8.5	7.9
1966	7.5	46.6	39.1	158.6	80.4	62.0	18.3	78.2	757.8	9.5	9.0
1967	7.4	49.5	42.1	179.7	92.7	73.4	19.3	87.0	806.1	5.8	6.4
1968	5.5	54.8	49.3	197.7	100.1	79.1	21.0	97.6	884.8	9.3	9.8
1969	5.6	60.4	54.7	207.3	100.0	78.9	21.1	107.2	954.1	8.0	7.8
1970	8.5	68.9	60.5	218.2	98.8	76.8	22.0	119.4	1,012.3	5.4	6.1
1971	6.3	72.4	66.1	232.4	99.8	74.1	25.8	132.5	1,094.9	8.6	8.2
1972	3.2	81.4	78.2	250.0	105.8	77.4	28.4	144.2	1,202.3	10.0	9.8
1973	16.8	114.1	97.3	266.5	106.4	77.5	28.9	160.1	1,339.7	12.1	11.4
1974	16.3	151.5	135.2	299.1	116.2	82.6	33.6	182.9	1,457.4	8.3	8.8
1975	31.1	161.3	130.3	335.0	129.2	89.6	39.6	205.9	1,604.1	8.5	10.1
1976	18.8	177.7	158.9	356.9	136.3	93.4	42.9	220.6	1,766.8	11.5	10.1
1977	1.9	191.6	189.7	387.3	151.1	100.9	50.3	236.2	1,969.2	11.7	11.5
1978	4.1	227.5	223.4	425.2	161.8	108.9	52.9	263.4	2,221.0	13.0	12.8
1979	18.8	291.2	272.5	467.8	178.0	121.9	56.1	289.9	2,495.2	11.5	12.3
1980	32.1	351.0	318.9	530.3	208.1	142.7	65.4	322.2	2,740.3	8.9	9.8
1981	33.9	382.8	348.9	588.1	242.2	167.5	74.8	345.9	3,028.6	11.7	10.5
1982	26.3	361.9	335.6	641.7	272.7	193.8	78.9	369.0	3,190.5	3.7	5.3
1983	−6.1	352.5	358.7	675.0	283.5	214.4	69.1	391.5	3,412.8	7.6	7.0
1984	−58.9	383.5	442.4	735.9	310.5	234.3	76.2	425.3	3,704.5	10.8	8.5
1985	−79.2	369.9	449.2	818.6	353.9	259.3	94.6	464.7	4,000.3	6.3	8.0
1986	−105.5	376.2	481.7	869.7	366.2	277.8	88.4	503.5	4,219.3	5.6	5.5
1987 ᵖ	−119.9	426.7	546.7	923.8	380.6	295.2	85.3	543.2	4,440.4	5.9	5.2
1982: IV	14.1	335.9	321.9	671.8	293.2	205.4	87.7	378.7	3,272.4	4.2	11.0
1983: IV	−25.8	364.7	390.5	676.1	276.1	221.5	54.6	400.0	3,514.8	12.4	7.8
1984: IV	−67.9	385.7	453.6	764.5	326.0	244.1	81.9	438.5	3,806.8	4.7	7.0
1985: I	−51.5	376.3	427.7	784.1	336.3	250.2	86.1	447.8	3,899.8	7.4	10.1
II	−77.3	370.6	447.8	800.5	339.4	253.7	85.7	461.1	3,955.1	5.5	5.8
III	−84.7	364.2	448.9	832.8	361.9	265.1	96.8	470.9	4,044.4	7.1	9.3
IV	−103.5	368.7	472.2	857.0	378.0	268.2	109.8	479.0	4,101.9	6.3	5.8
1986: I	−93.8	373.5	467.3	846.9	356.7	266.6	90.1	490.2	4,136.1	7.0	3.4
II	−100.8	371.3	472.1	867.2	368.4	278.2	90.2	498.8	4,184.0	3.6	4.7
III	−110.5	376.6	487.1	878.5	371.2	287.6	83.6	507.3	4,262.4	5.3	7.7
IV	−116.9	383.3	500.2	886.3	368.6	279.0	89.6	517.7	4,294.6	2.1	3.1
1987: I	−112.2	397.3	509.5	896.2	366.9	287.5	79.4	529.3	4,326.0	8.6	3.0
II	−118.4	416.5	534.8	917.1	379.6	294.5	85.1	537.6	4,404.8	6.3	7.5
III	−123.7	439.2	562.9	929.0	382.1	299.0	83.0	546.9	4,501.1	7.3	9.0
IV ᵖ	−125.5	453.9	579.4	952.8	393.7	300.0	93.7	559.1	4,529.9	6.7	2.6

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B-2.—*Gross national product in 1982 dollars, 1929–87*

[Billions of 1982 dollars, except as noted; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross national product	Personal consumption expenditures				Gross private domestic investment						
		Total	Durable goods	Nondurable goods	Services	Total	Fixed investment					Change in business inventories
							Total	Nonresidential			Residential	
								Total	Structures	Producers' durable equipment		
1929	709.6	471.4	40.3	211.4	219.7	139.2	128.4	93.0	54.7	38.4	35.4	10.8
1933	498.5	378.7	20.7	181.8	176.2	22.7	33.5	25.8	14.3	11.5	7.7	−10.7
1939	716.6	480.5	35.7	248.0	196.7	86.0	82.1	53.2	25.2	28.0	28.9	3.9
1940	772.9	502.6	40.6	259.4	202.7	111.8	97.4	65.0	28.5	36.5	32.5	14.4
1941	909.4	531.1	46.2	275.6	209.3	138.8	111.1	76.6	33.4	43.2	34.4	27.8
1942	1,080.3	527.6	31.3	279.1	217.2	76.7	64.7	47.4	20.9	26.5	17.3	12.0
1943	1,276.2	539.9	28.1	284.7	227.2	50.4	49.7	39.4	15.6	23.8	10.4	.7
1944	1,380.6	557.1	26.3	297.9	232.9	56.4	61.6	52.6	20.4	32.1	9.0	−5.2
1945	1,354.8	592.7	28.7	323.5	240.5	76.5	84.9	74.2	27.0	47.2	10.7	−8.4
1946	1,096.9	655.0	47.8	344.2	262.9	178.1	150.2	105.5	50.9	54.7	44.7	27.9
1947	1,066.7	666.6	56.5	337.4	272.6	177.9	178.9	121.7	47.5	74.2	57.2	−1.0
1948	1,108.7	681.8	61.7	338.7	281.4	208.2	196.0	127.4	50.5	76.9	68.6	12.3
1949	1,109.0	695.4	67.8	342.3	285.3	168.8	178.4	114.8	49.3	65.5	63.6	−9.7
1950	1,203.7	733.2	80.7	352.8	299.8	234.9	210.8	124.0	52.8	71.2	86.7	24.2
1951	1,328.2	748.7	74.7	362.9	311.1	235.2	204.3	131.7	56.5	75.2	72.6	30.8
1952	1,380.0	771.4	73.0	376.6	321.9	211.8	201.8	130.6	57.3	73.3	71.2	10.0
1953	1,435.3	802.5	80.2	388.2	334.1	216.6	213.8	140.1	62.3	77.7	73.8	2.8
1954	1,416.2	822.7	81.5	393.8	347.4	212.6	217.3	137.5	64.9	72.7	79.8	−4.8
1955	1,494.9	873.8	96.9	413.2	363.6	259.8	243.5	151.0	69.4	81.7	92.4	16.3
1956	1,525.6	899.8	92.8	426.9	380.1	257.8	244.9	160.4	75.5	84.9	84.4	12.9
1957	1,551.1	919.7	92.4	434.7	392.6	243.4	240.4	161.1	75.2	85.9	79.3	3.0
1958	1,539.2	932.9	86.9	439.9	406.1	221.4	224.8	143.9	70.6	73.3	81.0	−3.4
1959	1,629.1	979.4	96.9	455.8	426.7	270.3	253.8	153.6	71.9	81.7	100.2	16.5
1960	1,665.3	1,005.1	98.0	463.3	443.9	260.5	252.7	159.4	76.1	83.3	93.3	7.7
1961	1,708.7	1,025.2	93.6	470.1	461.4	259.1	251.8	158.2	77.7	80.5	93.6	7.3
1962	1,799.4	1,069.0	103.0	484.2	481.8	288.6	272.4	170.2	81.3	88.9	102.2	16.2
1963	1,873.3	1,108.4	111.8	494.3	502.3	307.1	290.5	176.6	81.6	95.1	113.9	16.6
1964	1,973.3	1,170.6	120.8	517.5	532.3	325.9	310.2	194.9	87.9	107.0	115.3	15.7
1965	2,087.6	1,236.4	134.6	543.2	558.5	367.0	341.8	227.6	101.8	125.8	114.2	25.2
1966	2,208.3	1,298.9	144.4	569.3	585.3	390.5	353.7	250.4	108.0	142.4	103.2	36.9
1967	2,271.4	1,337.7	146.2	579.2	612.3	374.4	345.6	245.0	105.4	139.6	100.6	28.8
1968	2,365.6	1,405.9	161.6	602.4	641.8	391.8	370.7	254.5	108.0	146.5	116.2	21.0
1969	2,423.3	1,456.7	167.8	617.2	671.7	410.3	385.1	269.7	112.9	156.8	115.4	25.1
1970	2,416.2	1,492.0	162.5	632.5	697.0	381.5	373.3	264.0	111.1	152.9	109.3	8.2
1971	2,484.8	1,538.8	178.3	640.3	720.2	419.3	399.7	258.4	107.3	151.0	141.3	19.6
1972	2,608.5	1,621.9	200.4	665.5	756.0	465.4	443.7	277.0	109.5	167.5	166.6	21.8
1973	2,744.1	1,689.6	220.3	683.2	786.1	520.8	480.8	317.3	117.7	199.6	163.4	40.0
1974	2,729.3	1,674.0	204.9	666.1	803.1	481.3	448.0	317.8	115.2	202.7	130.2	33.3
1975	2,695.0	1,711.9	205.6	676.5	829.8	383.3	396.1	281.2	102.8	178.4	114.9	−12.8
1976	2,826.7	1,803.9	232.3	708.8	862.8	453.5	431.4	290.6	104.4	186.2	140.8	22.1
1977	2,958.6	1,883.8	253.9	731.4	898.5	521.3	492.2	324.0	108.3	215.7	168.1	29.1
1978	3,115.2	1,961.0	267.4	753.7	939.8	576.9	540.2	362.1	119.3	242.8	178.0	36.8
1979	3,192.4	2,004.4	266.5	766.6	971.2	575.2	560.2	389.4	130.6	258.8	170.8	15.0
1980	3,187.1	2,000.4	245.9	762.6	991.9	509.3	516.2	379.2	136.2	243.0	137.0	−6.9
1981	3,248.8	2,024.2	250.8	764.4	1,009.0	545.5	521.7	395.2	148.8	246.4	126.5	23.9
1982	3,166.0	2,050.7	252.7	771.0	1,027.0	447.3	471.8	366.7	143.3	223.4	105.1	−24.5
1983	3,279.1	2,146.0	283.1	800.2	1,062.7	504.0	510.4	361.2	127.2	233.9	149.3	−6.4
1984	3,501.4	2,249.3	323.1	825.9	1,100.3	658.4	596.1	425.2	143.8	281.4	170.9	62.3
1985	3,607.5	2,352.6	352.7	849.5	1,150.4	636.1	628.7	454.1	149.4	304.8	174.6	7.4
1986	3,713.3	2,450.5	383.5	877.2	1,189.8	654.0	640.2	443.8	130.3	313.5	196.4	13.8
1987 p	3,819.6	2,495.2	388.1	875.9	1,231.2	685.4	643.0	446.8	124.3	322.5	196.2	42.4
1982: IV	3,159.3	2,078.7	262.0	778.6	1,038.1	408.8	468.1	352.3	138.3	214.1	115.8	−59.3
1983: IV	3,365.1	2,191.9	300.5	812.7	1,078.6	577.2	550.3	390.4	131.6	258.8	159.9	27.0
1984: IV	3,535.2	2,281.1	333.1	831.2	1,116.8	655.7	614.0	444.4	147.1	297.3	169.6	41.7
1985: I	3,568.7	2,314.1	342.4	841.2	1,130.5	632.1	612.7	440.0	149.1	291.0	172.6	19.5
II	3,587.1	2,337.0	346.6	847.6	1,142.8	645.7	628.4	457.2	151.7	305.5	171.2	17.3
III	3,623.0	2,376.1	366.8	853.5	1,155.7	623.2	628.9	454.1	149.5	304.5	174.9	−5.7
IV	3,650.9	2,383.2	355.1	855.7	1,172.5	643.3	644.9	465.2	147.2	318.0	179.7	−1.6
1986: I	3,698.8	2,409.7	359.8	868.8	1,181.2	674.4	639.1	453.2	145.4	307.8	185.9	35.3
II	3,704.7	2,434.3	369.6	880.0	1,184.7	665.6	637.6	441.0	128.4	312.6	196.5	28.1
III	3,718.0	2,477.5	405.5	879.8	1,192.2	645.0	638.8	437.7	122.7	315.0	201.1	6.1
IV	3,731.5	2,480.5	399.0	880.3	1,201.1	631.0	645.4	443.2	124.6	318.6	202.2	−14.4
1987: I	3,772.2	2,475.9	375.9	883.2	1,216.9	671.8	624.2	426.0	120.4	305.6	198.2	47.6
II	3,795.3	2,487.5	385.4	879.0	1,223.1	673.7	634.7	437.9	120.4	317.5	196.8	39.0
III	3,835.9	2,520.7	406.9	875.7	1,238.1	681.9	657.3	463.8	127.2	336.6	193.5	24.6
IV p	3,875.1	2,496.6	384.4	865.6	1,246.6	714.2	655.9	459.6	129.2	330.4	196.3	58.3

See next page for continuation of table.

TABLE B–2.—*Gross national product in 1982 dollars, 1929–87*—Continued

[Billions of 1982 dollars, except as noted; quarterly data at seasonally adjusted annual rates]

Year or quarter	Net exports of goods and services			Government purchases of goods and services					Final sales	Percent change from preceding period	
	Net exports	Exports	Imports	Total	Federal			State and local		Gross national product	Final sales
					Total	National defense	Nondefense				
1929	4.7	42.1	37.4	94.2	18.3	....	....	75.9	698.7	....	....
1933	−1.4	22.7	24.2	98.5	27.0	....	....	71.5	509.2	−2.1	−3.1
1939	6.1	36.2	30.1	144.1	53.8	....	....	90.3	712.7	7.9	6.3
1940	8.2	40.0	31.7	150.2	63.6	....	....	86.6	758.5	7.8	6.4
1941	3.9	42.0	38.2	235.6	153.0	....	....	82.6	881.6	17.7	16.2
1942	−7.7	29.1	36.9	483.7	407.1	....	....	76.7	1,068.3	18.8	21.2
1943	−23.0	25.1	48.0	708.9	638.1	....	....	70.8	1,275.5	18.1	19.4
1944	−23.8	27.3	51.1	790.8	722.5	....	....	68.3	1,385.7	8.2	8.6
1945	−18.9	35.2	54.1	704.5	634.0	....	....	70.5	1,363.3	−1.9	−1.6
1946	27.0	69.0	42.0	236.9	159.3	....	....	77.6	1,069.0	−19.0	−21.6
1947	42.4	82.3	39.9	179.8	91.9	....	....	87.9	1,067.7	−2.8	−.1
1948	19.2	66.2	47.1	199.5	106.1	....	....	93.4	1,096.4	3.9	2.7
1949	18.8	65.0	46.2	226.0	119.5	....	....	106.5	1,118.7	.0	2.0
1950	4.7	59.2	54.6	230.8	116.7	....	....	114.2	1,179.5	8.5	5.4
1951	14.6	72.0	57.4	329.7	214.4	....	....	115.4	1,297.4	10.3	10.0
1952	6.9	70.1	63.3	389.9	272.7	....	....	117.3	1,370.0	3.9	5.6
1953	−2.7	66.9	69.7	419.0	295.9	....	....	123.1	1,432.5	4.0	4.6
1954	2.5	70.0	67.5	378.4	245.0	....	....	133.4	1,421.0	−1.3	−.8
1955	.0	76.9	76.9	361.3	217.9	....	....	143.4	1,478.6	5.6	4.1
1956	4.3	87.9	83.6	363.7	215.4	....	....	148.3	1,512.7	2.1	2.3
1957	7.0	94.9	87.9	381.1	224.1	....	....	157.0	1,548.1	1.7	2.3
1958	−10.3	82.4	92.8	395.3	224.9	....	....	170.4	1,542.6	−.8	−.4
1959	−18.2	83.7	101.9	397.7	221.5	....	....	176.2	1,612.6	5.8	4.5
1960	−4.0	98.4	102.4	403.7	220.6	....	....	183.1	1,657.5	2.2	2.8
1961	−2.7	100.7	103.3	427.1	232.9	....	....	194.2	1,701.4	2.6	2.6
1962	−7.5	106.9	114.4	449.4	249.3	....	....	200.1	1,783.3	5.3	4.8
1963	−1.9	114.7	116.6	459.8	247.8	....	....	212.0	1,856.7	4.1	4.1
1964	5.9	128.8	122.8	470.8	244.2	....	....	226.6	1,957.6	5.3	5.4
1965	−2.7	132.0	134.7	487.0	244.4	....	....	242.5	2,062.4	5.8	5.4
1966	−13.7	138.4	152.1	532.6	273.8	....	....	258.8	2,171.5	5.8	5.3
1967	−16.9	143.6	160.5	576.2	304.4	....	....	271.8	2,242.6	2.9	3.3
1968	−29.7	155.7	185.3	597.6	309.6	....	....	288.0	2,344.6	4.1	4.5
1969	−34.9	165.0	199.9	591.2	295.6	....	....	295.6	2,398.1	2.4	2.3
1970	−30.0	178.3	208.3	572.6	268.3	....	....	304.3	2,407.9	−.3	.4
1971	−39.8	179.2	218.9	566.5	250.6	....	....	315.9	2,465.2	2.8	2.4
1972	−49.4	195.2	244.6	570.7	246.0	185.3	60.7	324.7	2,586.8	5.0	4.9
1973	−31.5	242.3	273.8	565.3	230.0	171.0	59.1	335.3	2,704.1	5.2	4.5
1974	.8	269.1	268.4	573.2	226.4	163.3	63.1	346.8	2,696.0	−.5	−.3
1975	18.9	259.7	240.8	580.9	226.3	161.1	65.2	354.6	2,707.8	−1.3	.4
1976	−11.0	274.4	285.4	580.3	224.2	157.5	66.8	356.0	2,804.6	4.9	3.6
1977	−35.5	281.6	317.1	589.1	231.8	159.2	72.7	357.2	2,929.5	4.7	4.5
1978	−26.8	312.6	339.4	604.1	233.7	160.7	73.0	370.4	3,078.4	5.3	5.1
1979	3.6	356.8	353.2	609.1	236.2	164.3	71.9	373.0	3,177.4	2.5	3.2
1980	57.0	388.9	332.0	620.5	246.9	171.2	75.7	373.6	3,194.0	−.2	.5
1981	49.4	392.7	343.4	629.7	259.6	180.3	79.3	370.1	3,225.0	1.9	1.0
1982	26.3	361.9	335.6	641.7	272.7	193.8	78.9	369.0	3,190.5	−2.5	−1.1
1983	−19.9	348.1	368.1	649.0	275.1	206.9	68.2	373.9	3,285.5	3.6	3.0
1984	−84.0	371.8	455.8	677.7	290.8	218.5	72.3	387.0	3,439.1	6.8	4.7
1985	−108.2	365.3	473.6	726.9	324.2	236.7	87.5	402.7	3,600.1	3.0	4.7
1986	−145.8	377.4	523.2	754.5	332.5	250.7	81.8	422.1	3,699.5	2.9	2.8
1987 ᵖ	−134.3	425.8	560.1	773.3	337.7	264.3	73.4	435.6	3,777.2	2.9	2.1
1982: IV	11.7	336.0	324.3	660.1	289.5	201.4	88.2	370.6	3,218.6	.6	7.1
1983: IV	−46.2	355.5	401.6	642.2	266.0	211.6	54.4	376.2	3,338.1	7.3	3.8
1984: IV	−94.8	376.6	471.4	693.2	300.5	225.3	75.2	392.7	3,493.5	1.7	4.0
1985: I	−81.0	369.7	450.7	703.4	308.4	229.8	78.6	395.0	3,549.2	3.8	6.5
II	−107.7	364.7	472.4	712.1	310.7	232.8	77.8	401.4	3,569.9	2.1	2.4
III	−114.9	360.5	475.4	738.6	332.5	243.3	89.3	406.1	3,628.7	4.1	6.8
IV	−129.3	366.5	495.8	753.7	345.3	241.1	104.2	408.4	3,652.5	3.1	2.6
1986: I	−123.0	371.5	494.4	737.6	322.1	240.0	82.0	415.5	3,663.4	5.4	1.2
II	−146.8	370.2	517.0	751.6	330.6	250.1	80.4	421.0	3,676.7	.6	1.5
III	−161.6	379.6	541.2	757.2	332.6	259.8	72.8	424.6	3,711.9	1.4	3.9
IV	−151.8	388.3	540.1	771.8	344.6	252.7	91.9	427.1	3,745.8	1.5	3.7
1987: I	−135.2	397.8	533.0	759.6	327.3	257.4	69.9	432.3	3,724.5	4.4	−2.3
II	−132.7	414.5	547.2	766.7	332.6	263.5	69.1	434.1	3,756.3	2.5	3.5
III	−138.4	437.1	575.6	771.7	336.3	268.3	67.9	435.4	3,811.4	4.3	6.0
IV ᵖ	−130.7	453.8	584.5	795.0	354.5	267.8	86.7	440.5	3,816.7	4.2	.6

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B-3.—*Implicit price deflators for gross national product, 1929–87*

[Index numbers, 1982 = 100, except as noted; quarterly data seasonally adjusted]

Year or quarter	Gross national product	Personal consumption expenditures				Gross private domestic investment [1]				
						Fixed investment				
							Nonresidential			
		Total	Durable goods	Non-durable goods	Services	Total	Total	Structures	Producers' durable equipment	Residential
1929	14.6	16.4	22.9	17.8	13.8	11.6	11.8	10.0	14.3	11.2
1933	11.2	12.1	16.8	12.2	11.4	9.4	9.8	7.6	12.5	8.1
1939	12.7	13.9	18.7	14.2	12.8	11.1	11.5	8.8	13.9	10.5
1940	13.0	14.1	19.2	14.3	12.9	11.5	11.9	9.0	14.2	10.9
1941	13.8	15.2	20.9	15.5	13.5	12.4	12.7	9.7	14.9	11.9
1942	14.7	16.8	22.0	18.2	14.3	13.2	13.3	10.7	15.3	12.8
1943	15.1	18.4	23.3	20.6	15.1	13.8	13.8	11.4	15.4	13.8
1944	15.3	19.4	25.4	21.6	16.0	14.2	14.0	11.6	15.6	14.9
1945	15.7	20.2	27.7	22.2	16.5	14.5	14.3	12.3	15.4	15.8
1946	19.4	22.0	33.0	24.0	17.3	16.7	16.4	14.5	18.2	17.5
1947	22.1	24.3	36.1	26.9	18.6	19.8	19.3	17.1	20.7	21.1
1948	23.6	25.7	37.1	28.5	19.7	21.7	21.0	18.9	22.5	22.8
1949	23.5	25.6	36.9	27.7	20.5	22.2	21.7	18.6	24.0	23.0
1950	23.9	26.2	38.1	27.8	21.1	22.9	22.4	18.8	25.0	23.7
1951	25.1	27.8	40.0	30.1	22.2	24.6	24.2	21.1	26.4	25.4
1952	25.5	28.4	40.1	30.5	23.3	25.0	24.4	21.3	26.9	26.1
1953	25.9	29.0	40.8	30.4	24.6	25.5	25.1	21.8	27.7	26.3
1954	26.3	29.1	39.4	30.4	25.3	25.6	25.2	21.4	28.6	26.4
1955	27.2	29.5	40.1	30.2	25.9	26.3	25.8	21.8	29.3	27.0
1956	28.1	30.1	41.2	30.6	26.7	27.8	27.7	24.1	31.0	27.9
1957	29.1	31.0	42.9	31.5	27.6	29.0	29.5	25.2	33.3	28.0
1958	29.7	31.6	42.8	32.2	28.5	28.9	29.5	24.8	34.0	28.0
1959	30.4	32.3	44.2	32.6	29.3	29.3	30.2	25.0	34.7	28.0
1960	30.9	32.9	44.4	33.1	30.2	29.7	30.6	25.2	35.6	28.2
1961	31.2	33.3	44.8	33.5	30.7	29.7	30.5	25.0	35.9	28.2
1962	31.9	33.9	45.7	33.8	31.4	29.9	30.9	25.2	36.1	28.3
1963	32.4	34.4	46.3	34.3	32.0	30.1	31.3	25.5	36.2	28.2
1964	32.9	35.0	47.0	34.7	32.5	30.4	31.5	25.9	36.2	28.5
1965	33.8	35.6	47.1	35.3	33.2	31.1	32.1	26.9	36.4	29.0
1966	35.0	36.7	47.5	36.6	34.2	32.4	33.3	28.2	37.2	29.9
1967	35.9	37.6	48.3	37.5	35.3	33.4	34.4	29.1	38.4	30.9
1968	37.7	39.3	50.1	39.0	36.8	34.8	35.9	30.4	39.9	32.5
1969	39.8	41.0	51.4	40.9	38.6	37.2	37.9	32.9	41.5	35.6
1970	42.0	42.9	52.7	42.7	40.7	39.0	39.9	35.2	43.2	37.0
1971	44.4	44.9	54.7	44.2	43.1	41.2	42.4	38.1	45.5	39.0
1972	46.5	46.7	55.5	45.8	45.1	43.2	44.4	40.6	46.8	41.2
1973	49.5	49.6	56.6	49.7	47.4	45.6	46.0	43.7	47.3	44.8
1974	54.0	54.8	60.4	57.2	51.3	50.3	50.5	49.5	51.1	49.8
1975	59.3	59.2	65.9	61.5	55.6	56.9	57.9	54.7	59.7	54.2
1976	63.1	62.6	69.5	63.8	59.8	60.7	61.9	57.6	64.4	58.0
1977	67.3	66.7	72.7	67.1	64.8	65.6	66.1	61.6	68.3	64.6
1978	72.2	71.6	76.9	71.9	69.8	71.9	71.5	67.9	73.3	72.6
1979	78.6	78.2	82.1	80.0	75.6	78.9	77.8	76.2	78.6	81.4
1980	85.7	86.6	89.2	89.4	83.9	86.3	85.1	83.6	86.0	89.4
1981	94.0	94.6	95.7	96.9	92.6	94.2	93.4	93.1	93.7	96.6
1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1983	103.9	104.1	102.1	102.1	106.2	99.8	98.8	97.5	99.5	102.2
1984	107.7	108.1	103.8	105.0	111.6	100.2	97.9	98.2	97.7	106.0
1985	111.2	111.8	104.5	107.5	117.1	100.5	97.5	102.1	95.2	108.2
1986	114.1	114.3	104.9	107.1	122.5	102.3	98.5	105.5	95.5	111.1
1987 p	117.5	118.9	106.6	111.9	127.6	104.3	98.9	107.9	95.5	116.5
1982: IV	101.7	101.8	100.7	101.0	102.7	100.3	100.7	99.5	101.5	99.1
1983: IV	105.4	105.7	103.1	103.1	108.3	99.7	98.3	96.8	99.1	103.1
1984: IV	109.0	109.3	104.1	105.8	113.5	100.5	97.9	99.6	97.0	107.2
1985: I	109.9	110.2	104.6	106.3	114.8	100.7	98.0	101.0	96.5	107.6
II	110.8	111.3	104.5	107.4	116.3	100.2	97.5	101.8	95.3	107.6
III	111.6	112.2	104.6	107.6	118.0	100.3	97.3	102.3	94.9	108.0
IV	112.4	113.3	104.3	108.6	119.4	100.5	97.1	103.3	94.1	109.5
1986: I	112.9	113.6	104.5	107.8	120.7	100.9	97.2	102.9	94.5	110.0
II	113.7	113.6	104.6	106.2	122.0	102.2	98.4	105.9	95.3	111.0
III	114.7	114.5	105.4	106.8	123.3	102.9	99.0	106.8	96.0	111.3
IV	114.9	115.2	105.2	107.5	124.3	103.3	99.2	106.7	96.3	112.2
1987: I	116.1	116.9	105.4	109.8	125.5	103.9	99.3	106.9	96.3	113.7
II	117.1	118.3	106.1	111.7	126.9	104.4	99.2	107.8	96.0	115.7
III	117.9	119.5	107.4	112.6	128.3	104.1	98.4	107.8	94.9	117.8
IV p	118.7	120.8	107.7	113.6	129.8	104.8	98.9	108.9	94.9	118.7

See next page for continuation of table.

TABLE B–3.—*Implicit price deflators for gross national product, 1929–87*—Continued

[Index numbers, 1982=100, except as noted; quarterly data seasonally adjusted]

Year or quarter	Exports and imports of goods and services [1]		Government purchases of goods and services					Final sales	Percent change from preceding period, GNP implicit price deflator [2]
			Total	Federal			State and local		
	Exports	Imports		Total	National defense	Non-defense			
1929	16.8	15.9	9.4	8.1			9.7	14.6	
1933	10.7	8.6	8.4	8.0			8.6	11.3	−2.2
1939	12.7	11.3	9.4	9.7			9.2	12.8	−.8
1940	13.6	11.6	9.5	9.7			9.3	13.0	2.0
1941	14.6	12.3	10.6	11.1			9.7	13.7	6.2
1942	17.2	13.1	12.4	12.8			10.2	14.7	6.6
1943	18.5	13.6	12.5	12.8			10.6	15.2	2.6
1944	20.2	14.1	12.3	12.4			11.2	15.3	1.4
1945	21.1	14.6	11.8	11.8			11.6	15.7	2.9
1946	22.0	17.4	12.3	12.0			12.8	19.3	22.9
1947	24.6	20.9	14.7	14.8			14.5	22.1	13.9
1948	26.5	22.4	16.3	16.3			16.3	23.4	7.0
1949	25.2	21.2	17.3	17.6			16.9	23.5	−.5
1950	24.4	22.5	16.8	16.3			17.3	23.9	2.0
1951	27.4	26.7	18.3	18.0			18.9	24.9	4.8
1952	27.4	25.3	19.4	19.3			19.7	25.4	1.5
1953	27.0	24.1	19.8	19.6			20.2	25.9	1.6
1954	26.9	24.1	20.1	19.7			20.7	26.3	1.6
1955	27.5	23.5	20.8	20.6			21.2	27.1	3.2
1956	28.6	23.8	21.9	21.5			22.4	28.0	3.4
1957	29.7	23.8	22.9	22.5			23.5	29.0	3.6
1958	29.6	22.7	24.1	24.2			24.0	29.7	2.1
1959	29.9	23.1	24.6	24.6			24.6	30.4	2.4
1960	30.4	23.4	24.9	24.7			25.2	30.9	1.6
1961	30.9	23.1	25.4	25.0			25.9	31.2	1.0
1962	31.0	22.9	26.3	25.9			26.7	31.9	2.2
1963	31.1	23.6	26.9	26.5			27.4	32.4	1.6
1964	31.4	24.1	27.6	27.2			28.0	32.9	1.5
1965	32.5	24.7	28.5	28.1			28.8	33.7	2.7
1966	33.7	25.7	29.8	29.4			30.2	34.9	3.6
1967	34.5	26.2	31.2	30.5			32.0	35.9	2.6
1968	35.2	26.6	33.1	32.3			33.9	37.7	5.0
1969	36.6	27.4	35.1	33.8			36.3	39.8	5.6
1970	38.7	29.0	38.1	36.8			39.2	42.0	5.5
1971	40.4	30.2	41.0	39.8			41.9	44.4	5.7
1972	41.7	32.0	43.8	43.0	41.8	46.8	44.4	46.5	4.7
1973	47.1	35.5	47.1	46.2	45.3	48.9	47.8	49.5	6.5
1974	56.3	50.4	52.2	51.3	50.6	53.3	52.8	54.1	9.1
1975	62.1	54.1	57.7	57.1	55.6	60.6	58.1	59.2	9.8
1976	64.8	55.7	61.5	60.8	59.3	64.3	62.0	63.0	6.4
1977	68.0	59.8	65.8	65.2	63.4	69.1	66.1	67.2	6.7
1978	72.8	65.8	70.4	69.2	67.8	72.4	71.1	72.1	7.3
1979	81.6	77.1	76.8	75.4	74.2	78.0	77.7	78.5	8.9
1980	90.2	96.0	85.5	84.3	83.4	86.4	86.2	85.8	9.0
1981	97.5	101.6	93.4	93.3	92.9	94.3	93.4	93.9	9.7
1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	6.4
1983	101.3	97.4	104.0	103.1	103.6	101.4	104.7	103.9	3.9
1984	103.2	97.1	108.6	106.8	107.2	105.5	109.9	107.7	3.7
1985	101.3	94.8	112.6	109.2	109.5	108.1	115.4	111.1	3.2
1986	99.7	92.1	115.3	110.2	110.8	108.1	119.3	114.1	2.6
1987 p	100.2	97.6	119.5	112.7	111.7	116.2	124.7	117.6	3.0
1982: IV	100.0	99.3	101.8	101.3	102.0	99.5	102.2	101.7	3.6
1983: IV	102.6	97.2	105.3	103.8	104.7	100.3	106.3	105.3	4.7
1984: IV	102.4	96.2	110.3	108.5	108.3	108.9	111.7	109.0	3.0
1985: I	101.8	94.9	111.5	109.0	108.9	109.5	113.4	109.9	3.3
II	101.6	94.8	112.4	109.3	109.0	110.1	114.9	110.8	3.3
III	101.0	94.4	112.7	108.8	109.0	108.4	116.0	111.5	2.9
IV	100.6	95.2	113.7	109.5	111.2	105.4	117.3	112.3	2.9
1986: I	100.6	94.5	114.8	110.7	111.1	109.8	118.0	112.9	1.8
II	100.3	91.3	115.4	111.4	111.2	112.2	118.5	113.8	2.9
III	99.2	90.0	116.0	111.6	110.7	115.0	119.5	114.8	3.6
IV	98.7	92.6	114.8	107.0	110.4	97.5	121.2	114.7	.7
1987: I	99.9	95.6	118.0	112.1	111.7	113.6	122.4	116.1	4.2
II	100.5	97.7	119.6	114.1	111.8	123.1	123.8	117.3	3.5
III	100.5	97.8	120.4	113.6	111.4	122.2	125.6	118.1	2.8
IV p	100.0	99.1	119.9	111.1	112.0	108.2	126.9	118.7	2.7

---

[1] Separate deflators are not calculated for gross private domestic investment, change in business inventories, and net exports of goods and services.

[2] Quarterly changes are at annual rates.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B-4.—*Fixed-weighted price indexes for gross national product, 1982 weights, 1959–87*

[Index numbers, 1982=100, except as noted; quarterly data seasonally adjusted]

Year or quarter	Gross national product	Personal consumption expenditures	Gross private domestic investment[1]			Exports and imports of goods and services[1]		Government purchases of goods and services					Percent change from preceding period, GNP fixed-weighted price index[2]
			Fixed investment						Federal				
			Total	Nonresidential	Residential	Exports	Imports	Total	Total	National defense	Nondefense	State and local	
1959	37.6	35.2	58.0	65.9	30.2	32.8	27.0	25.8	26.9	...	...	24.9	...
1960	38.1	35.7	58.1	66.1	30.3	33.5	27.3	26.4	27.3	...	...	25.7	1.4
1961	38.4	36.1	58.0	66.0	30.2	34.0	27.0	27.0	27.8	...	...	26.4	.7
1962	38.7	36.4	58.0	66.1	29.9	34.1	26.7	27.8	28.4	...	...	27.3	.8
1963	39.1	36.8	58.0	66.2	29.5	34.4	27.1	28.5	29.3	...	...	27.9	1.0
1964	39.6	37.2	58.2	66.4	29.6	34.8	27.7	29.3	30.1	...	...	28.5	1.2
1965	40.1	37.7	58.5	66.7	30.0	35.9	28.1	30.0	30.8	...	...	29.3	1.4
1966	41.1	38.5	59.3	67.4	30.8	37.1	29.1	31.3	32.0	...	...	30.6	2.5
1967	42.1	39.5	60.2	68.4	31.6	38.2	29.5	32.7	32.8	...	...	32.5	2.6
1968	43.7	41.0	61.4	69.5	33.1	39.3	30.1	34.5	34.5	...	...	34.4	3.7
1969	45.6	42.8	63.2	71.0	36.0	40.9	31.2	36.6	36.4	...	...	36.7	4.4
1970	47.2	44.7	61.5	68.4	37.4	43.3	33.4	39.6	39.5	...	...	39.6	3.6
1971	48.8	46.6	60.6	66.6	39.5	45.3	35.6	42.3	42.4	...	...	42.2	3.5
1972	50.3	48.3	59.8	65.0	41.6	46.5	37.8	45.2	46.0	44.3	50.5	44.6	2.9
1973	53.1	51.0	61.8	66.6	45.1	50.8	42.4	48.8	50.1	47.4	56.9	47.8	5.5
1974	57.2	55.8	64.4	68.5	50.1	59.8	54.5	53.5	54.8	51.4	63.3	52.6	7.8
1975	61.8	60.1	69.0	73.1	54.6	65.4	59.7	58.6	59.4	56.5	66.6	57.9	8.0
1976	65.1	63.5	71.4	75.2	58.4	67.4	61.3	62.2	62.4	59.7	69.0	62.0	5.3
1977	68.4	67.5	72.6	74.9	64.8	70.3	66.1	66.0	65.8	63.5	71.5	66.2	5.1
1978	72.7	72.2	74.5	75.0	72.5	74.5	71.3	70.9	70.6	68.6	75.5	71.2	6.2
1979	78.8	78.6	80.3	80.1	81.2	82.9	80.9	77.3	76.8	75.1	81.0	77.7	8.5
1980	86.1	86.8	86.9	86.1	89.4	90.5	96.3	86.3	86.4	84.7	90.6	86.2	9.3
1981	94.1	94.6	94.5	93.9	96.6	97.7	101.5	94.1	94.9	93.8	97.4	93.5	9.3
1982	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	6.2
1983	104.1	104.2	100.4	99.9	102.2	101.6	97.7	104.5	104.1	103.7	105.1	104.8	4.1
1984	108.3	108.4	101.5	100.2	106.0	104.3	97.5	109.2	108.0	107.6	108.9	110.1	4.0
1985	112.1	112.3	103.2	101.8	108.2	103.7	95.7	113.7	110.8	111.1	110.0	115.8	3.6
1986	115.1	115.2	104.9	103.2	110.9	103.6	92.6	116.5	111.3	112.1	109.3	120.3	2.7
1987 ᵖ	119.1	120.0	107.4	104.9	116.1	105.9	99.5	121.2	114.4	115.3	112.1	126.2	3.4
1982: IV	101.7	101.8	100.2	100.5	99.1	100.0	99.3	102.0	101.7	101.8	101.4	102.2	4.0
1983: IV	105.7	105.8	100.5	99.6	103.3	103.2	97.6	106.0	105.4	104.7	107.0	106.4	4.0
1984: IV	109.6	109.7	102.3	100.9	107.2	104.0	96.8	110.7	109.0	109.0	109.1	111.9	3.2
1985: I	110.7	110.7	102.6	101.2	107.6	103.9	95.4	112.3	110.5	110.7	110.1	113.7	4.1
II	111.7	111.9	102.9	101.6	107.6	104.0	95.6	113.2	110.4	110.6	110.1	115.2	3.7
III	112.5	112.8	103.4	102.0	108.0	103.6	95.1	113.9	110.4	110.7	109.7	116.4	2.9
IV	113.5	114.0	104.0	102.5	109.4	103.5	96.6	115.2	111.7	112.3	110.1	117.8	3.4
1986: I	114.1	114.4	104.1	102.4	109.9	103.9	95.1	115.7	111.7	112.4	109.9	118.7	2.2
II	114.7	114.5	104.8	103.1	110.7	103.8	91.4	116.0	111.4	112.0	109.9	119.4	2.2
III	115.5	115.5	105.1	103.3	111.1	103.5	91.6	116.5	111.0	111.9	108.7	120.5	2.6
IV	116.1	116.4	105.7	103.9	112.0	103.5	93.5	117.6	111.1	112.1	108.7	122.4	2.3
1987: I	117.4	118.0	106.4	104.3	113.5	104.5	96.3	119.3	113.2	114.2	110.5	123.8	4.5
II	118.6	119.5	107.1	104.7	115.3	105.6	98.9	120.6	114.3	115.3	111.7	125.2	4.1
III	119.6	120.7	107.9	105.2	117.4	106.4	100.7	121.7	114.4	115.3	112.4	127.1	3.4
IV ᵖ	120.7	121.9	108.4	105.5	118.2	107.0	101.9	123.1	115.6	116.3	113.7	128.6	3.7

[1] Separate price indexes are not calculated for gross private domestic investment, change in business inventories, and net exports of goods and services.

[2] Quarterly changes are at annual rates.

Source: Department of Commerce, Bureau of Economic Analysis.

Table B–5.—*Changes in gross national product, personal consumption expenditures, and related price measures, 1933–87*

[Percent change from preceding period; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross national product					Personal consumption expenditures				
	Current dollars	Constant (1982) dollars	Implicit price deflator	Chain price index	Fixed-weighted price index (1982 weights)	Current dollars	Constant (1982) dollars	Implicit price deflator	Chain price index	Fixed-weighted price index (1982 weights)
1933	−4.2	−2.1	−2.2	....	....	−5.7	−1.6	−4.2	....	....
1939	7.0	7.9	−.8	....	....	4.6	5.1	−.5	....	....
1940	10.0	7.8	2.0	....	....	6.0	4.6	1.3	....	....
1941	25.0	17.7	6.2	....	....	13.8	5.7	7.7	....	....
1942	26.6	18.8	6.6	....	....	9.7	−.7	10.4	....	....
1943	21.2	18.1	2.6	....	....	12.2	2.3	9.6	....	....
1944	9.7	8.2	1.4	....	....	8.8	3.2	5.4	....	....
1945	.9	−1.9	2.9	....	....	10.5	6.4	3.9	....	....
1946	−.5	−19.0	22.9	....	....	20.4	10.5	8.9	....	....
1947	10.8	−2.8	13.9	....	....	12.5	1.8	10.6	....	....
1948	11.2	3.9	7.0	....	....	8.0	2.3	5.6	....	....
1949	−.5	.0	−.5	....	....	1.9	2.0	−.1	....	....
1950	10.7	8.5	2.0	....	....	7.7	5.4	2.2	....	....
1951	15.7	10.3	4.8	....	....	8.3	2.1	6.1	....	....
1952	5.5	3.9	1.5	....	....	5.3	3.0	2.2	....	....
1953	5.7	4.0	1.6	....	....	6.2	4.0	2.1	....	....
1954	.2	−1.3	1.6	....	....	3.1	2.5	.6	....	....
1955	9.0	5.6	3.2	....	....	7.5	6.2	1.3	....	....
1956	5.5	2.1	3.4	....	....	4.9	3.0	1.9	....	....
1957	5.3	1.7	3.6	....	....	5.4	2.2	3.2	....	....
1958	1.3	−.8	2.1	....	....	3.3	1.4	1.8	....	....
1959	8.5	5.8	2.4	....	....	7.4	5.0	2.2	....	....
1960	3.9	2.2	1.6	1.5	1.4	4.6	2.6	1.9	1.7	1.5
1961	3.6	2.6	1.0	1.0	.7	3.1	2.0	1.2	1.1	.9
1962	7.6	5.3	2.2	1.2	.8	6.1	4.3	1.8	1.1	.9
1963	5.6	4.1	1.6	1.3	1.0	5.5	3.7	1.5	1.4	1.1
1964	7.1	5.3	1.5	1.5	1.2	7.2	5.6	1.7	1.2	1.2
1965	8.5	5.8	2.7	1.8	1.4	7.7	5.6	1.7	1.5	1.2
1966	9.5	5.8	3.6	3.0	2.5	8.3	5.1	3.1	2.7	2.2
1967	5.8	2.9	2.6	2.8	2.6	5.5	3.0	2.5	2.5	2.5
1968	9.3	4.1	5.0	4.3	3.7	9.7	5.1	4.5	4.0	3.8
1969	8.0	2.4	5.6	5.0	4.4	8.2	3.6	4.3	4.4	4.3
1970	5.4	−.3	5.5	5.2	3.6	7.0	2.4	4.6	4.7	4.6
1971	8.6	2.8	5.7	4.8	3.5	8.1	3.1	4.7	4.3	4.2
1972	10.0	5.0	4.7	4.2	2.9	9.5	5.4	4.0	3.6	3.5
1973	12.1	5.2	6.5	5.9	5.5	10.5	4.2	6.2	6.0	5.7
1974	8.3	−.5	9.1	8.9	7.8	9.5	−.9	10.5	10.3	9.4
1975	8.5	−1.3	9.8	9.2	8.0	10.5	2.3	8.0	8.0	7.7
1976	11.5	4.9	6.4	5.9	5.3	11.5	5.4	5.7	5.7	5.6
1977	11.7	4.7	6.7	6.1	5.1	11.3	4.4	6.5	6.4	6.3
1978	13.0	5.3	7.3	7.2	6.2	11.6	4.1	7.3	7.2	7.0
1979	11.5	2.5	8.9	8.7	8.5	11.6	2.2	9.2	9.2	8.8
1980	8.9	−.2	9.0	9.0	9.3	10.6	−.2	10.7	10.9	10.5
1981	11.7	1.9	9.7	9.4	9.3	10.5	1.2	9.2	9.2	9.0
1982	3.7	−2.5	6.4	6.3	6.2	7.1	1.3	5.7	5.7	5.6
1983	7.6	3.6	3.9	4.1	4.1	9.0	4.6	4.1	4.2	4.2
1984	10.8	6.8	3.7	3.9	4.0	8.8	4.8	3.8	3.9	4.0
1985	6.3	3.0	3.2	3.5	3.6	8.2	4.6	3.4	3.6	3.7
1986	5.6	2.9	2.6	2.4	2.7	6.5	4.2	2.2	2.5	2.6
1987 ᵖ	5.9	2.9	3.0	3.2	3.4	5.9	1.8	4.0	4.1	4.2
1982: IV	4.2	.6	3.6	4.1	4.0	10.3	5.3	4.4	4.8	4.8
1983: IV	12.4	7.3	4.7	3.9	4.0	9.7	5.5	4.3	4.1	4.1
1984: IV	4.7	1.7	3.0	3.1	3.2	7.2	4.3	3.0	3.1	3.2
1985: I	7.4	3.8	3.3	4.0	4.1	9.4	5.9	3.3	3.5	3.4
II	5.5	2.1	3.3	3.8	3.7	8.4	4.0	4.1	4.4	4.5
III	7.1	4.1	2.9	2.8	2.9	10.1	6.9	3.3	3.2	3.3
IV	6.3	3.1	2.9	3.4	3.4	5.3	1.2	4.0	4.2	4.2
1986: I	7.0	5.4	1.8	1.7	2.2	5.7	4.5	1.1	1.5	1.7
II	3.6	.6	2.9	1.9	2.2	4.1	4.1	.0	.3	.3
III	5.3	1.4	3.6	2.6	2.6	10.7	7.3	3.2	3.6	3.6
IV	2.1	1.5	.7	2.0	2.3	3.1	.5	2.5	3.0	3.0
1987: I	8.6	4.4	4.2	4.2	4.5	5.0	−.7	6.0	5.5	5.7
II	6.3	2.5	3.5	3.7	4.1	7.1	1.9	4.9	5.2	5.2
III	7.3	4.3	2.8	3.3	3.4	9.5	5.4	4.1	4.0	4.0
IV ᵖ	6.7	4.2	2.7	3.3	3.7	.5	−3.8	4.4	4.1	4.2

Source: Department of Commerce, Bureau of Economic Analysis.

Table B–6.—*Gross national product by major type of product, 1929–87*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross national product	Final sales	Inventory change	Goods							Services	Structures	Auto output
				Total			Durable goods		Nondurable goods				
				Total	Final sales	Inventory change	Final sales	Inventory change	Final sales	Inventory change			
1929	103.9	102.2	1.7	56.1	54.4	1.7	16.1	1.4	38.3	0.3	35.9	11.9	....
1933	56.0	57.6	−1.6	27.0	28.6	−1.6	5.4	−.5	23.2	−1.1	25.9	3.1	....
1939	91.3	90.9	.4	49.0	48.6	.4	12.4	.3	36.2	.1	34.5	7.8	....
1940	100.4	98.3	2.2	56.0	53.8	2.2	15.4	1.2	38.4	1.0	35.8	8.6	....
1941	125.5	121.0	4.5	72.5	68.0	4.5	23.8	3.1	44.2	1.4	40.9	12.1	....
1942	159.0	157.2	1.8	93.7	91.9	1.8	34.5	1.0	57.4	.7	50.9	14.4	....
1943	192.7	193.4	−.6	120.4	121.0	−.6	54.2	.0	66.8	−.6	63.2	9.2	....
1944	211.4	212.3	−1.0	132.3	133.3	−1.0	58.5	−.6	74.8	−.3	72.4	6.6	....
1945	213.4	214.4	−1.0	128.9	129.9	−1.0	50.1	−1.3	79.8	.2	77.3	7.2	....
1946	212.4	206.0	6.4	125.3	118.9	6.4	31.8	5.3	87.1	1.1	70.5	16.6	....
1947	235.2	235.7	−.5	139.8	140.3	−.5	44.4	1.4	95.9	−1.9	72.7	22.8	7.2
1948	261.6	256.9	4.7	154.4	149.7	4.7	48.0	1.0	101.7	3.7	78.0	29.2	8.8
1949	260.4	263.4	−3.1	147.7	150.8	−3.1	50.0	−1.8	100.9	−1.3	83.0	29.6	11.9
1950	288.3	281.4	6.8	162.4	155.6	6.8	56.2	3.6	99.4	3.2	89.0	36.9	15.4
1951	333.4	323.2	10.2	189.9	179.6	10.2	66.4	6.1	113.2	4.2	104.4	39.1	13.3
1952	351.6	348.6	3.1	195.5	192.4	3.1	72.6	1.2	119.8	1.9	115.2	40.9	12.0
1953	371.6	371.1	.4	204.6	204.2	.4	78.0	1.5	126.2	−1.1	123.4	43.6	16.1
1954	372.5	374.1	−1.6	198.0	199.6	−1.6	74.1	−2.5	125.5	.9	128.5	46.0	14.7
1955	405.9	400.2	5.7	216.3	210.6	5.7	81.7	3.4	128.9	2.3	138.5	51.1	21.2
1956	428.2	423.6	4.6	225.4	220.7	4.6	86.2	2.1	134.5	2.5	148.9	53.9	16.9
1957	451.0	449.6	1.4	234.7	233.3	1.4	91.7	.5	141.6	.9	161.6	54.8	19.4
1958	456.8	458.3	−1.5	230.5	232.0	−1.5	84.8	−2.8	147.2	1.3	170.9	55.5	14.5
1959	495.8	490.0	5.8	250.8	245.1	5.8	91.1	3.1	154.0	2.6	183.5	61.5	19.4
1960	515.3	512.3	3.1	257.2	254.1	3.1	93.8	1.6	160.3	1.4	197.4	60.7	21.3
1961	533.8	531.4	2.4	260.4	258.0	2.4	93.1	−.1	164.8	2.5	210.9	62.5	17.8
1962	574.6	568.5	6.1	281.5	275.4	6.1	103.4	3.4	172.0	2.7	226.4	66.7	22.4
1963	606.9	601.1	5.8	293.2	287.4	5.8	110.0	2.7	177.4	3.1	242.2	71.5	25.1
1964	649.8	644.4	5.4	313.5	308.1	5.4	119.6	4.0	188.5	1.4	261.1	75.2	25.9
1965	705.1	695.2	9.9	342.9	333.0	9.9	132.4	6.7	200.6	3.2	280.5	81.7	31.1
1966	772.0	757.8	14.2	380.1	365.9	14.2	147.9	10.2	218.1	4.0	307.2	84.6	30.2
1967	816.4	806.1	10.3	395.1	384.9	10.3	154.5	5.5	230.4	4.8	334.9	86.4	27.8
1968	892.7	884.8	7.9	427.4	419.5	7.9	169.1	4.7	250.4	3.2	368.0	97.2	35.0
1969	963.9	954.1	9.8	456.6	446.8	9.8	180.1	6.4	266.7	3.4	402.3	105.1	34.7
1970	1,015.5	1,012.3	3.1	467.8	464.7	3.1	182.1	−.1	282.6	3.2	441.1	106.5	28.5
1971	1,102.7	1,094.9	7.8	493.0	485.2	7.8	189.4	2.8	295.8	4.9	484.9	124.8	38.9
1972	1,212.8	1,202.3	10.5	537.4	526.9	10.5	209.7	7.2	317.2	3.3	533.2	142.1	41.4
1973	1,359.3	1,339.7	19.6	616.4	596.8	19.6	241.9	15.0	354.9	4.6	586.6	156.3	46.0
1974	1,472.8	1,457.4	15.4	663.1	647.7	15.4	257.2	11.2	390.4	4.3	650.6	159.1	38.8
1975	1,598.4	1,604.1	−5.6	714.7	720.3	−5.6	288.2	−7.0	432.2	1.3	725.2	158.5	40.3
1976	1,782.8	1,766.8	16.0	798.9	782.9	16.0	323.6	10.3	459.3	5.7	803.5	180.4	55.2
1977	1,990.5	1,969.2	21.3	882.0	860.7	21.3	369.4	9.7	491.3	11.6	895.9	212.6	64.3
1978	2,249.7	2,221.0	28.6	991.4	962.8	28.6	416.9	20.1	545.9	8.6	1,003.0	255.3	68.3
1979	2,508.2	2,495.2	13.0	1,099.1	1,086.1	13.0	473.1	10.3	613.0	2.7	1,121.9	287.1	66.9
1980	2,732.0	2,740.3	−8.3	1,174.9	1,183.2	−8.3	499.4	−2.9	683.8	−5.4	1,265.0	292.0	60.1
1981	3,052.6	3,028.6	24.0	1,322.9	1,298.9	24.0	541.1	6.8	757.8	17.2	1,415.4	314.4	69.4
1982	3,166.0	3,190.5	−24.5	1,319.1	1,343.7	−24.5	542.9	−16.8	800.8	−7.7	1,547.5	299.4	66.5
1983	3,405.7	3,412.8	−7.1	1,396.1	1,403.2	−7.1	575.3	−1.0	827.9	−6.1	1,682.5	327.1	88.6
1984	3,772.2	3,704.5	67.7	1,581.4	1,513.7	67.7	641.3	40.2	872.4	27.5	1,813.9	377.0	105.1
1985	4,010.3	4,000.3	10.0	1,637.9	1,627.9	10.0	696.9	7.3	931.0	2.7	1,969.3	403.1	115.3
1986	4,235.0	4,219.3	15.7	1,693.8	1,678.0	15.7	721.9	4.8	956.1	10.9	2,116.2	425.1	119.4
1987 p	4,486.2	4,440.4	45.7	1,780.6	1,734.8	45.7	747.5	26.5	987.4	19.2	2,270.4	435.2	112.3
1982: IV	3,212.5	3,272.4	−59.9	1,309.8	1,369.7	−59.9	551.8	−42.7	817.9	−17.2	1,598.9	303.9	64.5
1983: IV	3,545.8	3,514.8	31.0	1,473.7	1,442.7	31.0	611.9	16.7	830.9	14.3	1,730.1	342.0	102.1
1984: IV	3,851.8	3,806.8	45.0	1,599.9	1,554.9	45.0	667.6	33.0	887.3	12.0	1,866.5	385.4	111.5
1985: I	3,921.1	3,899.8	21.4	1,620.5	1,599.1	21.4	681.4	16.3	917.7	5.1	1,907.6	393.0	113.6
II	3,973.6	3,955.1	18.5	1,629.4	1,611.0	18.5	692.9	6.4	918.1	12.1	1,943.3	400.8	113.7
III	4,042.0	4,044.4	−2.4	1,649.7	1,652.1	−2.4	714.4	−.1	937.7	−2.3	1,985.5	406.8	117.5
IV	4,104.4	4,101.9	2.5	1,651.9	1,649.4	2.5	699.0	6.7	950.4	−4.2	2,040.6	411.9	116.3
1986: I	4,174.4	4,136.1	38.3	1,682.8	1,644.5	38.3	691.1	25.9	953.4	12.5	2,070.2	421.4	116.2
II	4,211.6	4,184.0	27.5	1,689.9	1,662.4	27.5	707.0	10.1	955.4	17.5	2,097.9	423.8	118.9
III	4,265.9	4,262.4	3.5	1,703.5	1,700.0	3.5	747.9	−12.1	952.1	15.6	2,136.6	425.7	118.1
IV	4,288.1	4,294.6	−6.4	1,698.9	1,705.3	−6.4	741.8	−4.5	963.5	−1.9	2,160.0	429.3	124.6
1987: I	4,377.7	4,326.0	51.6	1,738.7	1,687.1	51.6	711.9	35.2	975.2	16.5	2,212.0	426.9	114.9
II	4,445.1	4,404.8	40.3	1,763.5	1,723.2	40.3	734.6	22.1	988.6	18.2	2,252.2	429.4	109.7
III	4,524.0	4,501.1	22.9	1,798.3	1,775.4	22.9	787.6	−1.9	987.8	24.8	2,289.3	436.4	107.1
IV p	4,598.0	4,529.9	68.1	1,821.8	1,753.7	68.1	755.7	50.7	997.9	17.4	2,328.2	448.0	117.6

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–7.—*Gross national product by major type of product in 1982 dollars, 1929–87*

[Billions of 1982 dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross national product	Final sales	Inventory change	Goods							Services	Structures	Auto output
				Total			Durable goods		Nondurable goods				
				Total	Final sales	Inventory change	Final sales	Inventory change	Final sales	Inventory change			
1929	709.6	698.7	10.8	308.1	297.3	10.8	85.8	7.5	211.5	3.3	290.0	111.4	....
1933	498.5	509.2	−10.7	210.0	220.7	−10.7	34.9	−4.5	185.7	−6.2	252.1	36.5	....
1939	716.6	712.7	3.9	331.7	327.8	3.9	74.8	1.6	253.1	2.3	306.4	78.5	....
1940	772.9	758.5	14.4	370.3	355.9	14.4	91.9	7.2	264.0	7.2	318.1	84.5	....
1941	909.4	881.6	27.8	431.9	404.2	27.8	122.9	17.4	281.2	10.3	367.1	110.3	....
1942	1,080.3	1,068.3	12.0	504.1	492.1	12.0	163.3	7.5	328.8	4.5	460.4	115.8	....
1943	1,276.2	1,275.5	.7	608.6	607.9	.7	254.4	1.4	353.5	−.7	598.9	68.7	....
1944	1,380.6	1,385.7	−5.2	664.6	669.8	−5.2	292.4	−3.8	377.4	−1.4	665.0	50.9	....
1945	1,354.8	1,363.3	−8.4	639.1	647.5	−8.4	263.1	−7.8	384.4	−.6	662.3	53.5	....
1946	1,096.9	1,069.0	27.9	521.0	493.1	27.9	129.6	23.1	363.5	4.8	472.0	104.0	....
1947	1,066.7	1,067.7	−1.0	517.1	518.1	−1.0	164.7	2.8	353.4	−3.8	431.0	118.6	24.1
1948	1,108.7	1,096.4	12.3	531.7	519.4	12.3	166.5	3.4	353.0	8.8	438.1	138.9	27.6
1949	1,109.0	1,118.7	−9.7	517.9	527.6	−9.7	166.8	−6.1	360.8	−3.6	450.1	141.0	35.5
1950	1,203.7	1,179.5	24.2	561.4	537.2	24.2	180.0	11.4	357.1	12.8	470.4	171.9	44.9
1951	1,328.2	1,297.4	30.8	623.0	592.2	30.8	208.8	19.1	383.4	11.7	537.7	167.5	38.3
1952	1,380.0	1,370.0	10.0	641.3	631.3	10.0	229.8	3.6	401.5	6.4	567.3	171.4	34.9
1953	1,435.3	1,432.5	2.8	676.6	673.8	2.8	245.4	4.7	428.4	−2.0	577.6	181.2	44.8
1954	1,416.2	1,421.0	−4.8	643.5	648.2	−4.8	230.6	−7.7	417.7	2.9	579.5	193.2	43.3
1955	1,494.9	1,478.6	16.3	683.9	667.6	16.3	245.2	9.5	422.3	6.8	601.0	210.0	58.2
1956	1,525.6	1,512.7	12.9	697.1	684.1	12.9	248.3	6.3	435.8	6.7	619.7	208.9	45.8
1957	1,551.1	1,548.1	3.0	699.3	696.3	3.0	251.3	1.9	445.0	1.1	645.4	206.5	48.3
1958	1,539.2	1,542.6	−3.4	674.2	677.6	−3.4	229.1	−7.1	448.6	3.7	654.7	210.3	37.4
1959	1,629.1	1,612.6	16.5	716.6	700.1	16.5	236.8	8.2	463.4	8.3	681.5	231.0	45.7
1960	1,665.3	1,657.5	7.7	726.8	719.1	7.7	242.2	4.0	476.9	3.7	709.9	228.5	49.6
1961	1,708.7	1,701.4	7.3	730.2	723.0	7.3	239.2	−.1	483.7	7.3	743.0	235.4	41.1
1962	1,799.4	1,783.3	16.2	773.5	757.3	16.2	260.2	8.4	497.1	7.7	777.0	248.9	49.8
1963	1,873.3	1,856.7	16.6	797.5	780.8	16.6	273.4	7.1	507.4	9.5	811.5	264.4	54.6
1964	1,973.3	1,957.6	15.7	845.2	829.5	15.7	295.4	11.2	534.1	4.5	852.8	275.3	55.3
1965	2,087.6	2,062.4	25.2	904.0	878.8	25.2	322.2	17.4	556.5	7.8	891.6	292.0	66.9
1966	2,208.3	2,171.5	36.9	974.7	937.8	36.9	354.2	26.3	583.6	10.6	942.7	291.0	64.8
1967	2,271.4	2,242.6	28.8	993.1	964.3	28.8	363.6	14.4	600.7	14.4	990.6	287.6	58.3
1968	2,365.6	2,344.6	21.0	1,024.8	1,003.7	21.0	378.5	11.8	625.3	9.3	1,032.0	308.8	70.5
1969	2,423.3	2,398.1	25.1	1,048.5	1,023.3	25.1	389.7	15.2	633.6	9.9	1,066.9	307.9	67.6
1970	2,416.2	2,407.9	8.2	1,030.0	1,021.7	8.2	381.7	−.5	640.1	8.8	1,092.4	293.8	53.1
1971	2,484.8	2,465.2	19.6	1,037.6	1,017.9	19.6	375.5	7.1	642.4	12.5	1,126.1	321.2	69.8
1972	2,608.5	2,586.8	21.8	1,093.8	1,072.1	21.8	409.4	15.4	662.7	6.4	1,169.4	345.4	73.9
1973	2,744.1	2,704.1	40.0	1,175.0	1,135.0	40.0	474.9	30.8	660.1	9.2	1,218.7	350.4	82.0
1974	2,729.3	2,696.0	33.3	1,159.2	1,125.9	33.3	476.0	20.0	649.9	13.3	1,256.4	313.7	65.4
1975	2,695.0	2,707.8	−12.8	1,125.0	1,137.8	−12.8	471.1	−11.4	666.7	−1.4	1,286.4	283.6	61.8
1976	2,826.7	2,804.6	22.1	1,194.7	1,172.5	22.1	490.9	15.9	681.7	6.3	1,324.4	307.6	80.1
1977	2,958.6	2,929.5	29.1	1,256.2	1,227.1	29.1	534.0	14.2	693.1	14.9	1,368.7	333.7	88.7
1978	3,115.2	3,078.4	36.8	1,329.1	1,292.4	36.8	572.5	27.5	719.9	9.3	1,426.9	359.1	87.3
1979	3,192.4	3,177.4	15.0	1,354.6	1,339.6	15.0	604.6	13.3	735.1	1.7	1,478.6	359.2	80.2
1980	3,187.1	3,194.0	−6.9	1,344.2	1,351.1	−6.9	584.0	−3.2	767.1	−3.7	1,511.1	331.8	67.1
1981	3,248.8	3,225.0	23.9	1,386.0	1,362.2	23.9	578.5	6.9	783.7	16.9	1,533.4	329.4	73.3
1982	3,166.0	3,190.5	−24.5	1,319.1	1,343.7	−24.5	542.9	−16.8	800.8	−7.7	1,547.5	299.4	66.5
1983	3,279.1	3,285.5	−6.4	1,367.0	1,373.4	−6.4	566.3	−1.2	807.0	−5.2	1,585.5	326.6	85.9
1984	3,501.4	3,439.1	62.3	1,509.2	1,446.9	62.3	623.5	38.2	823.3	24.2	1,625.2	367.1	98.5
1985	3,607.5	3,600.1	7.4	1,548.6	1,541.2	7.4	681.6	6.4	859.7	.9	1,679.5	379.4	105.6
1986	3,713.3	3,699.5	13.8	1,595.0	1,581.3	13.8	712.6	4.3	868.6	9.5	1,730.8	387.4	106.4
1987 p	3,819.6	3,777.2	42.4	1,655.1	1,612.7	42.4	748.1	24.1	864.6	18.2	1,781.4	383.2	98.7
1982: IV	3,159.3	3,218.6	−59.3	1,297.9	1,357.1	−59.3	543.8	−42.4	813.4	−16.9	1,555.5	305.9	63.3
1983: IV	3,365.1	3,338.1	27.0	1,423.8	1,396.8	27.0	598.0	16.1	798.8	10.9	1,600.7	340.6	96.4
1984: IV	3,535.2	3,493.5	41.7	1,520.2	1,478.5	41.7	647.8	31.1	830.7	10.6	1,644.7	370.3	104.2
1985: I	3,568.7	3,549.2	19.5	1,537.0	1,517.6	19.5	660.3	15.0	857.2	4.5	1,657.7	373.9	104.8
II	3,587.1	3,569.9	17.3	1,540.7	1,523.4	17.3	677.1	5.5	846.3	11.8	1,667.5	379.0	104.2
III	3,623.0	3,628.7	−5.7	1,557.7	1,563.5	−5.7	699.2	−.4	864.2	−5.3	1,683.1	382.2	107.4
IV	3,650.9	3,652.5	−1.6	1,558.9	1,560.5	−1.6	689.6	5.6	870.9	−7.2	1,709.6	382.4	106.1
1986: I	3,698.8	3,663.4	35.3	1,589.5	1,554.1	35.3	682.1	23.6	872.0	11.7	1,718.9	390.4	106.0
II	3,704.7	3,676.7	28.1	1,594.4	1,566.4	28.1	696.9	9.0	869.5	19.1	1,724.2	386.0	106.7
III	3,718.0	3,711.9	6.1	1,593.7	1,587.5	6.1	735.9	−11.1	851.6	17.2	1,738.7	385.6	103.1
IV	3,731.5	3,745.8	−14.4	1,602.6	1,616.9	−14.4	735.5	−4.3	881.4	−10.0	1,741.3	387.5	109.6
1987: I	3,772.2	3,724.5	47.6	1,626.0	1,578.4	47.6	707.8	31.4	870.6	16.2	1,764.0	382.1	102.3
II	3,795.3	3,756.3	39.0	1,638.2	1,599.2	39.0	733.4	19.9	865.9	19.1	1,777.4	379.7	97.0
III	3,835.9	3,811.4	24.6	1,666.8	1,642.2	24.6	787.3	−1.0	854.9	25.5	1,787.1	382.0	93.5
IV p	3,875.1	3,816.7	58.3	1,689.2	1,630.9	58.3	763.9	46.2	866.9	12.1	1,797.0	388.8	102.1

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B-8.—*Gross national product by sector, 1929–87*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross national product	Gross domestic product									Rest of the world
		Total	Business [1]				Households and institutions	Government [2]			
			Total [1]	Nonfarm [1]	Farm	Statistical discrepancy		Total	Federal	State and local	
1929	103.9	103.2	96.0	84.8	9.7	1.5	2.9	4.4	0.9	3.5	0.8
1933	56.0	55.7	49.3	43.6	4.6	1.2	1.7	4.7	1.2	3.5	.3
1939	91.3	90.9	81.0	73.0	6.3	1.7	2.3	7.6	3.5	4.2	.4
1940	100.4	100.1	89.8	82.0	6.4	1.4	2.4	7.8	3.5	4.3	.4
1941	125.5	125.0	113.0	103.4	8.9	.7	2.5	9.5	5.1	4.4	.5
1942	159.0	158.5	140.4	128.0	13.0	−.7	2.9	15.2	10.7	4.5	.5
1943	192.7	192.3	163.4	149.8	15.3	−1.7	3.2	25.6	21.0	4.7	.4
1944	211.4	210.9	174.9	156.9	15.3	2.7	3.7	32.3	27.3	4.9	.5
1945	213.4	213.0	173.5	153.5	16.0	4.0	4.1	35.3	30.0	5.4	.4
1946	212.4	211.6	184.8	165.2	18.8	.7	4.5	22.4	16.2	6.2	.7
1947	235.2	234.1	211.3	189.3	20.2	1.8	5.1	17.6	10.3	7.3	1.2
1948	261.6	260.1	236.4	214.4	23.3	−1.3	5.6	18.1	9.6	8.5	1.5
1949	260.4	259.0	232.9	213.3	18.8	.8	5.9	20.1	10.7	9.4	1.4
1950	288.3	286.7	259.0	238.3	20.0	.8	6.5	21.2	11.1	10.1	1.5
1951	333.4	331.4	296.7	271.1	22.9	2.7	6.9	27.7	16.6	11.2	2.0
1952	351.6	349.4	310.7	286.7	22.2	1.8	7.2	31.5	19.3	12.3	2.2
1953	371.6	369.5	329.3	306.3	20.3	2.6	7.8	32.4	19.1	13.3	2.1
1954	372.5	370.3	329.1	306.7	19.7	2.7	8.1	33.0	18.3	14.7	2.2
1955	405.9	403.3	359.4	338.8	18.8	1.8	9.1	34.8	19.0	15.8	2.6
1956	428.2	425.2	378.1	361.4	18.6	−1.9	9.9	37.2	19.6	17.6	3.0
1957	451.0	447.7	397.3	380.1	18.4	−1.2	10.6	39.8	20.2	19.6	3.4
1958	456.8	453.9	399.5	378.9	20.7	−.1	11.5	42.9	21.3	21.6	2.9
1959	495.8	492.7	435.5	417.9	19.0	−1.5	12.4	44.8	21.7	23.1	3.1
1960	515.3	511.8	449.9	432.5	20.2	−2.8	13.9	48.1	22.6	25.5	3.5
1961	533.8	530.0	463.9	445.0	20.2	−1.2	14.5	51.6	23.6	27.9	3.8
1962	574.6	570.1	499.1	478.6	20.4	.0	15.6	55.4	25.2	30.2	4.5
1963	606.9	602.0	526.0	506.2	20.5	−.6	16.7	59.3	26.5	32.9	4.9
1964	649.8	644.4	562.1	544.3	19.3	−1.4	17.9	64.4	28.5	35.9	5.4
1965	705.1	699.3	610.7	590.0	21.9	−1.2	19.3	69.3	30.0	39.3	5.8
1966	772.0	766.3	666.7	641.7	22.8	2.1	21.3	78.4	34.3	44.1	5.6
1967	816.4	810.4	699.7	677.8	22.2	−.4	23.4	87.4	37.8	49.5	6.0
1968	892.7	885.9	762.0	740.4	22.7	−1.1	26.1	97.8	41.9	55.9	6.8
1969	963.9	957.1	820.1	798.8	25.2	−3.9	29.5	107.5	44.9	62.6	6.8
1970	1,015.5	1,008.2	856.3	831.2	26.3	−1.1	32.4	119.5	48.4	71.1	7.3
1971	1,102.7	1,093.4	927.4	897.5	28.1	1.8	35.6	130.3	51.1	79.3	9.3
1972	1,212.8	1,201.6	1,020.0	988.8	32.8	−1.6	39.0	142.6	54.9	87.7	11.2
1973	1,359.3	1,343.1	1,145.0	1,098.3	51.0	−4.3	43.0	155.0	57.1	97.9	16.2
1974	1,472.8	1,453.3	1,237.5	1,190.0	49.2	−1.7	47.2	168.7	61.1	107.6	19.5
1975	1,598.4	1,580.9	1,341.2	1,288.4	50.3	2.5	52.0	187.7	66.5	121.1	17.5
1976	1,782.8	1,761.7	1,500.7	1,448.7	48.5	3.6	57.1	203.8	70.9	132.9	21.1
1977	1,990.5	1,965.1	1,682.1	1,631.7	50.4	.0	62.4	220.5	75.5	145.0	25.4
1978	2,249.7	2,219.1	1,908.4	1,850.0	60.3	−1.9	70.2	240.5	81.7	158.9	30.5
1979	2,508.2	2,464.4	2,125.3	2,054.5	71.8	−1.0	78.6	260.4	86.9	173.5	43.8
1980	2,732.0	2,684.4	2,306.8	2,236.4	65.5	4.9	89.3	288.3	96.1	192.2	47.6
1981	3,052.6	3,000.5	2,582.8	2,498.9	79.8	4.1	101.0	316.7	107.4	209.3	52.1
1982	3,166.0	3,114.8	2,658.2	2,581.3	77.0	−.1	112.7	343.9	117.0	226.9	51.2
1983	3,405.7	3,355.9	2,866.6	2,802.1	59.3	5.2	122.9	366.4	124.7	241.7	49.9
1984	3,772.2	3,724.8	3,201.5	3,118.5	77.6	5.4	132.7	390.6	132.1	258.5	47.4
1985	4,010.3	3,970.5	3,409.5	3,340.1	75.1	−5.6	142.2	418.8	140.5	278.3	39.8
1986	4,235.0	4,201.3	3,605.2	3,533.8	76.4	−4.9	152.2	443.9	143.9	299.9	33.7
1987 [p]	4,486.2	4,460.2	3,822.9	3,747.3	82.3	−6.8	164.2	473.1	150.3	322.8	25.9
1982: IV	3,212.5	3,163.8	2,693.6	2,607.7	79.0	6.8	116.9	353.4	120.7	232.6	48.7
1983: IV	3,545.8	3,494.6	2,994.8	2,932.7	59.6	2.5	126.6	373.1	126.0	247.2	51.3
1984: IV	3,851.8	3,805.9	3,270.6	3,198.7	74.0	−2.1	136.1	399.1	134.0	265.1	46.0
1985: I	3,921.1	3,880.4	3,332.1	3,256.9	74.5	.7	138.3	410.0	139.1	270.9	40.7
II	3,973.6	3,933.4	3,377.0	3,314.3	74.6	−11.9	140.7	415.7	139.9	275.8	40.2
III	4,042.0	4,004.4	3,439.7	3,376.3	72.5	−9.1	143.6	421.1	140.3	280.8	37.6
IV	4,104.4	4,063.9	3,489.3	3,412.9	78.7	−2.3	146.1	428.4	142.7	285.7	40.5
1986: I	4,174.4	4,134.7	3,551.6	3,480.6	73.9	−2.9	148.8	434.3	143.2	291.1	39.8
II	4,211.6	4,179.4	3,587.9	3,509.9	77.1	.9	151.2	440.3	143.7	296.7	32.2
III	4,265.9	4,230.4	3,630.7	3,557.9	78.8	−6.1	153.4	446.3	144.0	302.3	35.5
IV	4,288.1	4,260.6	3,650.8	3,586.6	75.7	−11.6	155.4	454.5	144.7	309.8	27.5
1987: I	4,377.7	4,346.9	3,725.2	3,650.4	76.9	−2.2	158.9	462.9	148.8	314.1	30.7
II	4,445.1	4,417.3	3,785.0	3,704.1	84.1	−3.1	162.2	470.0	150.2	319.8	27.8
III	4,524.0	4,500.6	3,858.5	3,785.5	83.9	−10.9	165.9	476.2	150.6	325.6	23.4
IV [p]	4,598.0	4,576.1	3,922.9	3,849.4	84.4	−10.9	169.8	483.4	151.8	331.6	21.9

[1] Includes compensation of employees in government enterprises.
[2] Compensation of government employees.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–9.—*Gross national product by sector in 1982 dollars, 1929–87*

[Billions of 1982 dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross national product	Gross domestic product										Rest of the world
		Total	Business [1]				Households and institutions	Government [2]				
			Total [1]	Nonfarm [1]	Farm	Statistical discrepancy		Total	Federal	State and local		
1929	709.6	704.6	611.6	547.8	54.1	9.7	34.4	58.6	13.2	45.3	4.9
1933	498.5	496.1	404.9	338.7	56.6	9.6	27.1	64.0	16.2	47.9	2.4
1939	716.6	713.5	586.8	518.3	56.4	12.1	33.3	93.4	38.9	54.6	3.1
1940	772.9	770.3	635.5	571.2	54.6	9.7	35.8	99.0	44.1	55.0	2.6
1941	909.4	906.0	738.7	675.8	58.1	4.8	35.8	131.5	76.2	55.3	3.4
1942	1,080.3	1,077.1	832.9	774.4	62.4	−4.0	36.9	207.4	152.9	54.4	3.1
1943	1,276.2	1,273.4	891.6	841.6	59.2	−9.2	34.3	347.6	294.6	52.9	2.7
1944	1,380.6	1,377.7	934.3	862.5	57.2	14.6	34.3	409.1	357.5	51.7	2.9
1945	1,354.8	1,352.6	914.3	839.3	53.7	21.3	34.4	403.8	350.7	53.2	2.3
1946	1,096.9	1,093.3	866.3	809.0	54.0	3.3	35.4	191.6	135.0	56.6	3.6
1947	1,066.7	1,061.6	886.1	828.6	49.9	7.6	37.9	137.7	76.7	61.0	5.1
1948	1,108.7	1,102.5	925.4	875.1	55.2	−4.9	41.2	135.8	73.2	62.6	6.2
1949	1,109.0	1,103.4	916.7	858.5	55.0	3.2	42.4	144.2	77.1	67.1	5.6
1950	1,203.7	1,197.4	1,002.8	941.4	58.3	3.1	45.0	149.6	80.3	69.3	6.2
1951	1,328.2	1,320.3	1,080.5	1,014.9	56.0	9.7	46.1	193.7	122.8	71.0	7.9
1952	1,380.0	1,371.7	1,114.7	1,050.9	57.2	6.5	46.2	210.7	137.5	73.3	8.3
1953	1,435.3	1,427.4	1,170.0	1,101.3	59.3	9.4	47.7	209.7	133.2	76.5	7.9
1954	1,416.2	1,407.8	1,154.6	1,084.2	60.9	9.5	48.4	204.8	125.0	79.8	8.4
1955	1,494.9	1,485.5	1,229.7	1,161.5	62.0	6.2	53.2	202.6	119.2	83.4	9.4
1956	1,525.6	1,515.0	1,254.1	1,199.6	60.7	−6.2	56.1	204.8	116.1	88.7	10.7
1957	1,551.1	1,539.7	1,274.0	1,219.0	58.8	−3.8	57.7	208.0	114.5	93.5	11.5
1958	1,539.2	1,529.7	1,260.4	1,199.7	61.2	−.5	60.7	208.6	109.5	99.2	9.5
1959	1,629.1	1,619.1	1,345.8	1,291.6	58.8	−4.6	62.7	210.6	107.5	103.1	10.0
1960	1,665.3	1,654.1	1,369.7	1,317.2	61.1	−8.7	67.4	217.1	108.9	108.2	11.1
1961	1,708.7	1,696.6	1,403.2	1,346.7	60.2	−3.7	68.0	225.4	111.5	113.9	12.1
1962	1,799.4	1,785.6	1,480.9	1,421.1	59.8	.1	70.7	233.9	116.7	117.3	13.9
1963	1,873.3	1,858.5	1,546.7	1,488.7	59.8	−1.8	72.5	239.2	116.1	123.1	14.9
1964	1,973.3	1,957.1	1,635.2	1,581.6	57.7	−4.1	74.6	247.3	116.8	130.5	16.1
1965	2,087.6	2,070.6	1,737.4	1,681.8	59.0	−3.4	77.4	255.8	117.3	138.5	17.0
1966	2,208.3	2,192.5	1,837.1	1,776.5	54.7	5.9	80.4	275.0	128.1	146.9	15.9
1967	2,271.4	2,255.0	1,880.9	1,824.2	57.7	−1.0	83.1	291.0	138.5	152.4	16.3
1968	2,365.6	2,347.9	1,961.1	1,908.3	55.7	−2.8	85.6	301.2	140.7	160.5	17.7
1969	2,423.3	2,406.2	2,009.8	1,962.1	57.2	−9.5	88.2	308.2	141.0	167.2	17.0
1970	2,416.2	2,399.1	2,004.4	1,946.4	60.7	−2.7	87.0	307.7	133.2	174.5	17.1
1971	2,484.8	2,464.1	2,068.0	2,001.4	62.3	4.2	88.8	307.4	125.5	181.9	20.7
1972	2,608.5	2,584.9	2,186.6	2,128.0	62.0	−3.4	91.2	307.1	118.3	188.8	23.7
1973	2,744.1	2,711.8	2,309.1	2,256.6	61.1	−8.6	93.4	309.3	113.6	195.7	32.2
1974	2,729.3	2,693.5	2,283.9	2,226.5	60.7	−3.3	93.9	315.7	113.5	202.1	35.9
1975	2,695.0	2,665.7	2,249.6	2,180.6	64.8	4.2	96.4	319.6	112.8	206.8	29.3
1976	2,826.7	2,793.7	2,374.8	2,306.6	62.5	5.6	97.0	321.9	112.7	209.2	33.0
1977	2,958.6	2,921.2	2,497.2	2,434.9	62.2	.1	98.0	326.0	112.7	213.3	37.4
1978	3,115.2	3,073.0	2,639.2	2,581.0	61.0	−2.8	101.0	332.8	113.9	219.0	42.1
1979	3,192.4	3,136.6	2,696.4	2,633.2	64.6	−1.4	103.7	336.5	113.0	223.5	55.7
1980	3,187.1	3,131.7	2,683.2	2,613.1	64.2	5.9	107.3	341.2	114.4	226.8	55.5
1981	3,248.8	3,193.6	2,739.8	2,659.6	75.7	4.4	109.9	343.9	115.8	228.1	55.2
1982	3,166.0	3,114.8	2,658.2	2,581.3	77.0	−.1	112.7	343.9	117.0	226.9	51.2
1983	3,279.1	3,231.2	2,770.1	2,703.7	61.3	5.0	114.9	346.3	119.0	227.3	47.9
1984	3,501.4	3,457.5	2,990.1	2,916.6	68.5	5.0	117.6	349.8	120.5	229.3	43.9
1985	3,607.5	3,571.5	3,095.1	3,021.3	78.9	−5.1	121.1	355.3	122.3	232.9	36.0
1986	3,713.3	3,683.5	3,197.9	3,117.5	84.7	−4.3	125.9	359.7	122.6	237.1	29.8
1987 p	3,819.6	3,797.3	3,303.1	3,223.6	85.3	−5.8	130.9	363.3	122.9	240.4	22.3
1982: IV	3,159.3	3,111.3	2,654.1	2,567.1	80.3	6.7	113.8	343.5	117.6	225.9	48.0
1983: IV	3,365.1	3,316.6	2,853.2	2,795.3	55.6	2.3	115.8	347.5	119.4	228.1	48.5
1984: IV	3,535.2	3,493.1	3,022.2	2,953.0	71.1	−1.9	119.0	351.9	121.2	230.7	42.1
1985: I	3,568.7	3,531.6	3,058.9	2,983.6	74.7	.6	119.2	353.5	122.0	231.4	37.1
II	3,587.1	3,550.7	3,075.7	3,008.5	78.0	−10.8	120.5	354.5	122.2	232.3	36.5
III	3,623.0	3,589.0	3,111.1	3,038.7	80.6	−8.2	121.8	356.1	122.6	233.5	34.0
IV	3,650.9	3,614.6	3,134.6	3,054.2	82.4	−2.0	123.1	357.0	122.5	234.5	36.3
1986: I	3,698.8	3,663.4	3,181.1	3,100.4	83.2	−2.6	124.2	358.1	122.6	235.6	35.4
II	3,704.7	3,676.3	3,191.5	3,106.7	84.0	.8	125.8	359.0	122.4	236.6	28.4
III	3,718.0	3,686.9	3,200.2	3,120.2	85.3	−5.4	126.6	360.2	122.5	237.7	31.1
IV	3,731.5	3,707.3	3,218.5	3,142.5	86.3	−10.2	127.2	361.6	123.0	238.6	24.2
1987: I	3,772.2	3,745.6	3,254.7	3,171.4	85.2	−1.9	128.9	362.0	122.7	239.3	26.6
II	3,795.3	3,771.4	3,278.4	3,196.2	84.9	−2.7	130.0	363.0	122.8	240.2	23.9
III	3,835.9	3,815.9	3,320.3	3,243.7	86.0	−9.4	131.9	363.7	122.9	240.8	20.0
IV p	3,875.1	3,856.4	3,358.9	3,283.2	85.1	−9.3	133.0	364.5	123.0	241.5	18.6

[1] Includes compensation of employees in government enterprises.

[2] Compensation of government employees.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B-10.—*Gross national product by industry, 1947–86*

[Billions of dollars]

Year	Gross national product	Gross domestic product												Rest of the world
		Agriculture, forestry, and fisheries	Mining	Construction	Manufacturing			Transportation and public utilities	Wholesale and retail trade	Finance, insurance, and real estate	Services	Government and government enterprises	Statistical discrepancy	
					Total	Durable goods	Nondurable goods							
1947	235.2	20.8	6.8	9.1	66.2	33.5	32.7	21.0	44.2	23.8	20.2	20.2	1.8	1.2
1948	261.6	24.0	9.4	11.5	74.7	38.2	36.6	23.7	48.4	26.9	21.9	20.8	−1.3	1.5
1949	260.4	19.5	8.1	11.5	72.2	37.1	35.0	23.9	48.0	29.2	22.6	23.2	.8	1.4
1950	288.3	20.8	9.3	13.2	84.0	45.9	38.1	26.6	51.5	32.2	24.2	24.2	.8	1.5
1951	333.4	23.9	10.2	15.6	99.0	55.5	43.4	30.2	56.8	35.5	26.4	31.2	2.7	2.0
1952	351.6	23.2	10.2	16.9	103.3	59.0	44.3	32.2	59.0	39.1	28.1	35.7	1.8	2.2
1953	371.6	21.4	10.7	17.5	112.5	66.1	46.4	34.2	60.4	43.3	30.2	36.8	2.6	2.1
1954	372.5	20.8	11.0	17.7	106.7	61.0	45.7	33.8	61.6	47.0	31.6	37.4	2.7	2.2
1955	405.9	20.0	12.5	19.1	121.3	70.8	50.4	36.8	67.0	50.7	35.1	39.0	1.8	2.6
1956	428.2	19.8	13.6	21.3	127.2	73.9	53.3	39.6	71.3	54.3	38.7	41.2	−1.9	3.0
1957	451.0	19.6	13.7	22.2	131.8	78.0	53.9	41.7	75.0	58.5	41.7	44.5	−1.2	3.4
1958	456.8	22.1	12.6	21.8	124.3	70.0	54.3	41.9	76.4	63.1	44.0	47.8	−.1	2.9
1959	495.8	20.4	12.5	23.7	141.8	81.6	60.3	45.1	83.3	68.2	48.3	50.8	−1.5	3.1
1960	515.3	21.7	12.8	24.3	144.4	82.5	61.9	47.3	85.7	72.8	51.4	54.2	−2.8	3.5
1961	533.8	21.8	12.9	25.3	145.0	81.6	63.3	48.9	88.0	76.9	54.9	57.6	−1.2	3.8
1962	574.6	22.3	13.1	27.1	158.6	91.9	66.8	51.9	94.1	81.7	59.2	62.1	.0	4.5
1963	606.9	22.3	13.4	28.9	168.1	98.0	70.1	54.8	98.2	86.5	63.3	67.0	−.6	4.9
1964	649.8	21.4	13.8	31.6	180.2	105.7	74.5	58.3	107.1	92.0	69.0	72.5	−1.4	5.4
1965	705.1	24.2	14.0	34.7	198.4	118.4	80.0	62.6	115.0	98.9	74.6	78.2	−1.2	5.8
1966	772.0	25.3	14.6	37.9	217.4	130.8	86.6	67.4	124.1	106.9	82.5	88.1	2.1	5.6
1967	816.4	24.9	15.2	39.7	222.9	133.7	89.2	70.7	132.9	115.6	90.6	98.4	−.4	6.0
1968	892.7	25.7	16.2	43.5	243.6	146.1	97.5	76.4	146.8	125.1	99.1	110.5	−1.1	6.8
1969	963.9	28.6	17.1	48.7	257.1	154.2	102.9	82.6	159.2	136.3	110.5	121.0	−3.9	6.8
1970	1,015.5	29.9	18.7	51.4	252.3	145.9	106.3	88.4	168.7	145.8	120.2	134.0	−1.1	7.3
1971	1,102.7	32.2	18.8	56.5	265.7	153.8	111.9	97.1	183.7	161.4	130.2	145.9	1.8	9.3
1972	1,212.8	37.4	20.2	63.0	292.5	172.6	119.9	108.0	202.6	174.8	144.6	160.1	−1.6	11.2
1973	1,359.3	56.2	23.4	70.4	326.4	195.4	131.0	118.7	225.6	190.5	163.2	173.1	−4.3	16.2
1974	1,472.8	55.0	36.9	74.5	338.5	201.7	136.7	129.1	246.0	206.7	179.4	189.0	−1.7	19.5
1975	1,598.4	56.3	41.3	76.5	357.3	206.3	151.0	141.7	273.7	221.7	199.8	210.1	2.5	17.5
1976	1,782.8	55.7	46.0	86.2	409.3	239.7	169.7	160.4	299.7	246.1	224.9	229.7	3.6	21.1
1977	1,990.5	58.9	50.2	97.9	465.3	277.7	187.7	178.9	332.8	280.3	253.4	247.4	.0	25.4
1978	2,249.7	70.1	56.5	115.6	518.8	317.4	201.4	201.0	373.5	326.3	289.1	270.3	−1.9	30.5
1979	2,508.2	83.1	72.7	131.4	561.8	345.2	216.5	216.1	415.8	363.3	328.7	292.4	−1.0	43.8
1980	2,732.0	77.2	107.3	137.7	581.0	351.8	229.2	240.8	438.8	400.6	374.0	322.1	4.9	47.6
1981	3,052.6	92.0	143.7	138.4	643.1	385.8	257.3	269.6	483.1	449.3	422.6	354.7	4.1	52.1
1982	3,166.0	89.6	132.1	140.9	634.6	362.5	272.1	288.4	506.5	475.1	463.6	383.9	−.1	51.2
1983	3,405.7	74.3	118.4	149.6	683.2	385.6	297.6	320.0	542.9	536.4	515.5	410.5	5.2	49.9
1984	3,772.2	92.9	119.4	171.5	771.9	451.1	320.8	354.4	614.0	572.8	580.2	442.5	5.4	47.4
1985	4.010.3	90.6	118.2	184.4	799.3	469.9	329.3	376.2	663.6	622.8	643.7	477.4	−5.6	39.8
1986	4,235.0	93.0	95.3	197.9	824.3	478.5	345.8	391.4	702.5	695.0	700.2	506.6	−4.9	33.7

Note.—The industry classification is on an establishment basis and is based on the 1972 Standard Industrial Classification.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–11.—*Gross national product by industry in 1982 dollars, 1947–86*

[Billions of 1982 dollars]

Year	Gross national product	Gross domestic product													Rest of the world
		Agriculture, forestry, and fisheries	Mining	Construction	Manufacturing			Transportation and public utilities	Wholesale and retail trade	Finance, insurance, and real estate	Services	Government and government enterprises	Statistical discrepancy	Residual [1]	
					Total	Durable goods	Nondurable goods								
1947	1,066.7	55.6	67.6	76.7	226.1	138.1	88.0	100.0	157.8	103.0	124.7	156.2	7.6	−13.6	5.1
1948	1,108.7	61.3	72.4	90.0	238.5	145.0	93.5	98.7	161.9	107.7	128.9	155.5	−4.9	−7.5	6.2
1949	1,109.0	61.0	65.7	89.4	226.3	133.2	93.1	90.7	166.1	112.2	129.0	164.0	3.2	−4.2	5.6
1950	1,203.7	64.3	72.8	100.0	257.7	156.7	101.0	95.3	182.1	119.7	133.8	169.2	3.1	−.6	6.2
1951	1,328.2	62.6	80.8	110.9	288.4	181.4	107.0	104.9	183.7	126.4	136.9	214.0	9.7	2.0	7.9
1952	1,380.0	64.2	81.5	115.9	298.2	190.6	107.6	104.5	189.5	134.7	139.4	231.9	6.5	5.3	8.3
1953	1,435.3	66.3	84.3	119.9	319.9	208.4	111.5	106.7	195.6	142.2	142.7	230.9	9.4	9.4	7.9
1954	1,416.2	68.2	83.3	124.8	296.6	185.8	110.8	104.1	197.1	149.5	145.9	225.4	9.5	3.5	8.4
1955	1,494.9	69.1	92.0	133.3	327.7	208.5	119.2	112.3	215.0	160.2	153.0	223.4	6.2	−6.6	9.4
1956	1,525.6	67.8	96.5	142.7	330.6	207.3	123.3	117.7	221.5	168.8	161.1	225.6	−6.2	−11.1	10.7
1957	1,551.1	65.9	96.2	142.4	332.5	208.7	123.8	119.9	225.1	178.3	168.6	229.2	−3.8	−14.7	11.5
1958	1,539.2	68.3	89.1	147.5	303.5	180.1	123.4	116.1	225.0	184.5	174.3	230.1	−.5	−8.1	9.5
1959	1,629.1	65.8	94.1	160.4	338.0	203.0	135.0	123.5	240.7	195.9	183.5	232.8	−4.6	−11.0	10.0
1960	1,665.3	68.3	94.2	163.1	338.7	202.4	136.3	127.8	245.4	206.5	190.2	240.3	−8.7	−11.6	11.1
1961	1,708.7	67.5	95.6	165.1	339.4	199.9	139.5	130.0	247.8	215.0	197.7	249.2	−3.7	−6.9	12.1
1962	1,799.4	67.1	98.1	172.5	368.3	220.5	147.8	136.3	263.9	226.5	207.7	258.4	.1	−13.3	13.9
1963	1,873.3	67.2	102.2	177.5	397.4	238.9	158.5	143.8	273.9	235.9	217.4	264.5	−1.8	−19.7	14.9
1964	1,973.3	65.2	105.7	185.9	425.4	259.3	166.2	150.4	290.7	245.8	230.7	274.0	−4.1	−12.6	16.1
1965	2,087.6	66.7	109.4	193.7	462.5	286.9	175.6	161.5	309.8	259.8	240.4	284.3	−3.4	−14.0	17.0
1966	2,208.3	62.4	115.0	194.4	497.9	312.3	185.6	174.2	326.5	271.1	253.9	305.5	5.9	−14.5	15.9
1967	2,271.4	65.5	120.2	190.7	496.6	311.9	184.7	178.1	335.4	282.4	265.2	322.3	−1.0	−.2	16.3
1968	2,365.6	63.6	124.7	190.2	522.0	326.2	195.8	189.5	354.8	296.0	274.7	332.6	−2.8	2.8	17.7
1969	2,423.3	65.3	128.9	183.6	536.7	334.1	202.6	200.3	361.7	314.0	287.8	340.2	−9.5	−2.7	17.0
1970	2,416.2	68.8	134.5	168.0	506.8	304.8	202.0	203.9	367.6	320.7	295.7	339.6	−2.7	−3.9	17.1
1971	2,484.8	70.6	132.4	162.7	515.5	305.5	210.0	209.8	385.7	335.9	302.4	340.0	4.2	4.8	20.7
1972	2,608.5	70.9	134.4	166.7	561.2	336.5	224.8	223.8	414.8	350.9	320.0	340.5	−3.4	5.1	23.7
1973	2,744.1	70.3	133.4	170.4	621.3	377.0	244.3	243.0	437.0	367.7	340.2	343.4	−8.6	−6.2	32.2
1974	2,729.3	69.7	130.3	162.3	591.6	363.5	228.1	248.8	426.2	381.6	347.5	350.6	−3.3	−11.8	35.9
1975	2,695.0	73.1	125.6	149.4	547.5	325.2	222.2	246.4	433.1	387.6	352.4	355.0	4.2	−8.7	29.3
1976	2,826.7	71.5	124.4	158.1	600.6	357.4	243.2	257.1	454.4	403.1	367.7	357.7	5.6	−6.6	33.0
1977	2,958.6	71.6	126.2	165.1	645.0	386.2	258.9	268.5	479.2	417.7	388.4	362.9	1	−3.4	37.4
1978	3,115.2	71.8	128.8	176.7	683.4	415.9	267.5	284.8	502.3	442.5	411.9	371.5	−2.8	2.1	42.1
1979	3,192.4	76.1	130.0	173.5	697.1	423.5	273.5	293.4	511.7	459.2	429.8	376.2	−1.4	−9.0	55.7
1980	3,187.1	76.2	135.6	161.6	665.4	401.5	263.9	293.4	500.4	464.3	442.6	382.7	5.9	3.5	55.5
1981	3,248.8	88.0	139.8	147.4	676.1	404.9	271.2	296.2	507.3	474.2	462.5	385.3	4.4	12.5	55.2
1982	3,166.0	89.6	132.1	140.9	634.6	362.5	272.1	288.4	506.5	475.1	463.6	383.9	−.1	.0	51.2
1983	3,279.1	74.5	125.4	147.3	675.5	390.4	285.1	300.8	529.1	489.0	486.6	387.4	5.0	10.6	47.9
1984	3,501.4	82.2	133.0	159.2	757.9	466.8	291.1	320.4	578.9	506.6	514.0	392.1	5.0	8.1	43.9
1985	3,607.5	93.6	130.6	164.2	790.3	501.4	288.9	325.0	612.1	523.6	541.3	399.0	−5.1	−3.1	36.0
1986	3,713.3	100.4	118.1	168.3	812.2	517.7	294.4	328.3	644.7	551.3	564.9	405.4	−4.3	−5.7	29.8

[1] Equals GNP in constant dollars measured as the sum of incomes less GNP in constant dollars measured as the sum of gross product by industry.

Note.—The industry classification is on an establishment basis and is based on the 1972 Standard Industrial Classification.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–12.—*Gross domestic product of nonfinancial corporate business, 1929–87*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross domestic product of nonfinancial corporate business	Capital consumption allowances with capital consumption adjustment	Net domestic product												
			Total	Indirect business tax, etc.[1]	Domestic income										
					Total	Compensation of employees	Corporate profits with inventory valuation and capital consumption adjustments								Net interest
							Total	Profits					Inventory valuation adjustment	Capital consumption adjustment	
								Profits before tax	Profits tax liability	Profits after tax					
										Total	Dividends	Undistributed profits			
1929	50.4	5.3	45.1	3.4	41.8	32.3	8.0	8.4	1.2	7.3	5.1	2.2	0.5	−0.9	1.4
1933	24.6	4.2	20.4	3.8	16.5	16.7	−1.9	.6	.5	.1	2.0	−1.9	−2.1	−.3	1.7
1939	44.0	4.8	39.1	5.1	34.1	28.2	4.4	6.1	1.4	4.7	3.3	1.4	−.7	−1.0	1.5
1940	50.6	5.0	45.6	5.5	40.2	31.2	7.6	8.8	2.7	6.1	3.5	2.6	−.2	−1.0	1.4
1941	65.9	5.4	60.5	6.4	54.1	39.8	13.0	16.4	7.5	9.0	3.9	5.0	−2.5	−1.0	1.3
1942	83.3	6.0	77.3	6.8	70.5	51.0	18.2	20.1	11.2	8.9	3.7	5.2	−1.2	−.7	1.3
1943	99.1	6.1	93.0	7.3	85.7	62.2	22.4	23.6	13.8	9.8	3.9	5.8	−.8	−.4	1.1
1944	102.6	6.2	96.4	8.1	88.3	65.1	22.2	22.2	12.6	9.6	4.1	5.6	−.3	.3	1.0
1945	95.8	6.3	89.5	8.9	80.6	61.9	17.7	17.8	10.2	7.6	4.1	3.5	−.6	.5	1.0
1946	99.8	7.4	92.4	10.1	82.3	67.2	14.4	22.0	8.6	13.4	4.8	8.6	−5.3	−2.3	.7
1947	121.2	9.0	112.2	11.9	100.3	79.1	20.4	29.1	10.8	18.3	5.5	12.8	−5.9	−2.8	.8
1948	138.9	10.5	128.4	13.2	115.2	87.7	26.6	31.8	11.8	20.0	6.0	14.0	−2.2	−3.0	.9
1949	135.2	11.2	123.9	13.9	110.1	85.2	23.9	24.9	9.3	15.6	6.0	9.6	1.9	−2.9	1.0
1950	153.6	12.1	141.5	15.3	126.2	94.7	30.6	38.5	16.9	21.6	7.5	14.1	−5.0	−2.9	.9
1951	176.3	13.9	162.4	16.5	146.0	110.2	34.7	39.1	21.2	17.9	7.1	10.8	−1.2	−3.2	1.1
1952	184.0	14.9	169.1	18.0	151.1	118.2	31.7	33.8	17.8	16.0	7.1	8.8	1.0	−3.0	1.2
1953	196.6	15.9	180.7	19.2	161.5	128.6	31.5	34.9	18.5	16.4	7.3	9.1	−1.0	−2.4	1.3
1954	193.5	16.8	176.7	18.6	158.1	126.4	30.1	32.1	15.6	16.4	7.4	9.0	−.3	−1.6	1.6
1955	218.5	17.9	200.7	20.6	180.0	138.4	40.0	42.0	20.2	21.8	8.5	13.4	−1.7	−.3	1.6
1956	233.6	20.1	213.5	22.4	191.1	151.3	38.1	41.8	20.1	21.8	9.0	12.7	−2.7	−1.1	1.8
1957	244.1	22.1	221.9	23.7	198.2	159.0	37.0	39.8	19.1	20.7	9.3	11.4	−1.5	−1.2	2.2
1958	238.0	23.2	214.8	24.1	190.7	155.8	32.2	33.7	16.2	17.5	9.3	8.2	−.3	−1.2	2.7
1959	267.1	24.3	242.8	26.2	216.7	171.5	42.1	43.1	20.7	22.4	10.0	12.4	−.3	−.8	3.1
1960	277.6	25.3	252.4	28.5	223.9	181.2	39.2	39.7	19.2	20.5	10.6	9.9	−.2	−.2	3.5
1961	285.2	26.0	259.1	29.8	229.4	185.3	40.1	39.5	19.5	20.1	10.6	9.5	.3	.3	4.0
1962	311.1	27.0	284.2	32.2	252.0	200.1	47.3	44.2	20.6	23.5	11.4	12.2	.0	3.1	4.5
1963	331.1	28.2	303.0	34.2	268.7	211.1	52.8	48.9	22.8	26.2	12.6	13.5	.1	3.9	4.8
1964	357.7	29.6	328.0	36.8	291.2	226.7	59.3	55.4	24.0	31.4	13.7	17.7	−.5	4.4	5.3
1965	392.7	31.6	361.1	39.4	321.7	246.5	69.1	65.2	27.2	38.0	15.6	22.4	−1.2	5.2	6.1
1966	430.2	34.5	395.7	40.7	355.0	274.0	73.7	70.3	29.5	40.8	16.8	24.0	−2.1	5.5	7.4
1967	452.6	37.8	414.8	43.3	371.5	292.3	70.5	66.5	27.8	38.6	17.5	21.2	−1.6	5.5	8.8
1968	499.7	41.7	458.0	49.9	408.1	323.2	74.8	73.1	33.6	39.5	19.1	20.4	−3.7	5.3	10.1
1969	542.2	45.7	496.6	54.9	441.6	358.8	69.6	69.6	33.3	36.2	19.1	17.1	−5.9	5.9	13.2
1970	560.4	50.2	510.2	59.0	451.2	378.7	55.4	57.0	27.2	29.8	18.5	11.3	−6.6	5.0	17.1
1971	605.1	55.1	550.0	64.7	485.3	402.0	65.2	65.6	29.9	35.6	18.5	17.1	−4.6	4.2	18.1
1972	671.8	60.5	611.3	69.4	541.9	447.1	75.7	76.8	33.8	43.0	20.1	22.9	−6.6	5.5	19.2
1973	753.0	65.6	687.4	76.5	610.8	505.9	82.4	96.9	40.2	56.7	21.1	35.6	−20.0	5.6	22.5
1974	812.8	76.8	736.0	81.5	654.5	556.8	69.4	107.2	42.2	65.0	21.7	43.3	−39.5	1.7	28.3
1975	881.5	92.5	789.0	88.3	700.7	580.4	91.6	109.2	41.5	67.7	24.8	42.9	−11.0	−6.6	28.7
1976	995.5	103.0	892.5	95.4	797.1	656.3	113.3	138.3	53.0	85.4	27.8	57.6	−14.9	−10.2	27.5
1977	1,126.1	115.1	1,010.9	104.4	906.5	741.0	134.9	160.5	59.9	100.6	32.0	68.6	−16.6	−9.0	30.6
1978	1,274.1	130.8	1,143.3	114.1	1,029.2	847.4	146.0	182.1	67.1	115.0	37.2	77.8	−25.3	−10.9	35.9
1979	1,417.4	150.7	1,266.7	122.1	1,144.7	962.0	139.1	195.8	69.6	126.2	39.3	86.9	−43.2	−13.5	43.5
1980	1,540.8	172.5	1,368.2	138.5	1,229.7	1,051.1	123.1	181.8	67.0	114.8	45.5	69.3	−43.1	−15.5	55.5
1981	1,738.4	200.2	1,538.1	165.9	1,372.3	1,160.5	144.2	181.5	63.9	117.6	53.4	64.2	−24.2	−13.1	67.5
1982	1,782.2	223.0	1,559.3	166.9	1,392.4	1,203.9	111.9	129.7	46.3	83.4	59.7	23.7	−10.4	−7.5	76.6
1983	1,914.2	229.8	1,684.4	182.9	1,501.5	1,266.1	165.6	159.3	59.4	99.9	66.5	33.4	−10.9	17.1	69.8
1984	2,146.7	240.1	1,906.6	204.2	1,702.5	1,399.8	222.4	196.0	73.5	122.5	69.5	53.0	−5.8	32.1	80.3
1985	2,282.8	252.8	2,030.1	218.2	1,811.8	1,492.6	227.7	175.9	69.9	106.0	70.9	35.1	−.7	52.6	91.5
1986	2,376.1	264.4	2,111.7	226.4	1,885.3	1,560.7	225.8	174.6	78.3	96.3	74.1	22.2	6.5	44.6	98.9
1987 p	2,495.4	275.9	2,219.5	238.1	1,981.4	1,630.6	245.7	214.9	108.9	106.0	87.3	18.8	−17.4	48.1	105.2
1982: IV	1,779.4	229.7	1,549.7	169.7	1,379.9	1,206.5	100.1	116.3	41.0	75.4	62.2	13.2	−13.4	−2.8	73.4
1983: IV	2,012.5	232.2	1,780.3	189.6	1,590.7	1,319.7	199.5	183.2	70.6	112.7	68.8	43.9	−8.1	24.4	71.5
1984: IV	2,201.8	245.0	1,956.7	210.6	1,746.1	1,436.8	222.1	181.9	66.4	115.5	68.6	46.9	−1.6	41.8	87.2
1985: I	2,230.9	248.1	1,982.8	212.8	1,770.0	1,459.6	220.7	173.3	69.6	103.7	68.2	35.5	−1.5	48.9	89.7
II	2,266.2	251.2	2,015.0	219.4	1,795.7	1,481.7	223.7	168.3	65.8	102.5	75.6	26.9	1.8	53.6	90.2
III	2,312.4	254.3	2,058.0	219.7	1,838.4	1,501.7	244.9	183.4	73.5	109.9	68.9	41.0	6.5	54.9	91.8
IV	2.321.8	257.4	2.064.4	221.0	1,843.4	1,527.2	221.7	178.7	70.8	107.9	71.0	36.9	−9.8	52.8	94.5
1986: I	2,353.3	259.4	2,093.9	226.7	1,867.2	1,544.2	225.7	158.4	71.2	87.2	69.8	17.4	17.8	49.6	97.3
II	2,358.6	262.9	2,095.8	220.0	1,875.8	1,551.8	225.0	168.7	74.9	93.9	76.6	17.3	11.3	45.0	99.0
III	2,387.7	265.6	2,122.1	230.5	1,891.6	1,564.1	227.7	179.0	79.8	99.3	74.6	24.7	6.0	42.7	99.8
IV	2,404.7	269.6	2,135.1	228.5	1,906.6	1,582.6	224.6	192.1	87.2	104.9	75.6	29.2	−8.9	41.4	99.4
1987: I	2,434.8	271.8	2,163.0	231.4	1,931.6	1,598.4	233.4	196.9	99.8	97.1	82.4	14.7	−11.3	47.8	99.8
II	2,465.4	274.3	2,191.2	237.0	1,954.2	1,615.1	235.9	207.9	105.3	102.6	86.3	16.4	−20.0	47.9	103.2
III	2,521.1	277.2	2,243.9	242.0	2,001.9	1,638.6	256.2	226.0	114.4	111.6	89.9	21.7	−17.6	47.8	107.1
IV p	....	280.1	....	242.0	....	1,670.1	....	....	....	....	90.5	....	−20.7	49.0	110.7

[1] Indirect business tax and nontax liability plus business transfer payments less subsidies.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B-13.—*Output, costs, and profits of nonfinancial corporate business, 1948–87*

[Quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross domestic product of nonfinancial corporate business (billions of dollars)		Current-dollar cost and profit per unit of output (dollars)[1]								Output per hour of all employees (1982 dollars)	Compensation per hour of all employees (dollars)
			Total cost and profit[2]	Capital consumption allowances with capital consumption adjustment	Indirect business tax, etc.[3]	Compensation of employees	Corporate profits with inventory valuation and capital consumption adjustments			Net interest		
	Current dollars	1982 dollars					Total	Profits tax liability	Profits after tax[4]			
1948	138.9	538.9	0.258	0.019	0.025	0.163	0.049	0.022	0.027	0.002		
1949	135.2	515.7	.262	.022	.027	.165	.046	.018	.028	.002		
1950	153.6	570.4	.269	.021	.027	.166	.054	.030	.024	.002		
1951	176.3	622.4	.283	.022	.026	.177	.056	.034	.022	.002		
1952	184.0	637.3	.289	.023	.028	.185	.050	.028	.022	.002		
1953	196.6	668.4	.294	.024	.029	.192	.047	.028	.020	.002		
1954	193.5	650.8	.297	.026	.029	.194	.046	.024	.022	.002		
1955	218.5	719.3	.304	.025	.029	.192	.056	.028	.028	.002		
1956	233.6	747.0	.313	.027	.030	.203	.051	.027	.024	.002		
1957	244.1	758.1	.322	.029	.031	.210	.049	.025	.024	.003		
1958	238.0	725.2	.328	.032	.033	.215	.044	.022	.022	.004	12.053	2.589
1959	267.1	798.5	.335	.030	.033	.215	.053	.026	.027	.004	12.506	2.685
1960	277.6	820.8	.338	.031	.035	.221	.048	.023	.024	.004	12.672	2.797
1961	285.2	839.1	.340	.031	.035	.221	.048	.023	.025	.005	13.058	2.884
1962	311.1	904.8	.344	.030	.036	.221	.052	.023	.029	.005	13.550	2.997
1963	331.1	964.4	.343	.029	.035	.219	.055	.024	.031	.005	14.135	3.093
1964	357.7	1,029.0	.348	.029	.036	.220	.058	.023	.034	.005	14.655	3.229
1965	392.7	1,111.7	.353	.028	.035	.222	.062	.024	.038	.005	14.979	3.321
1966	430.2	1,189.5	.362	.029	.034	.230	.062	.025	.037	.006	15.205	3.502
1967	452.6	1,217.0	.372	.031	.036	.240	.058	.023	.035	.007	15.344	3.685
1968	499.7	1,286.5	.388	.032	.039	.251	.058	.026	.032	.008	15.715	3.948
1969	542.2	1,339.6	.405	.034	.041	.268	.052	.025	.027	.010	15.700	4.206
1970	560.4	1,325.2	.423	.038	.045	.286	.042	.021	.021	.013	15.713	4.490
1971	605.1	1,360.6	.445	.040	.048	.295	.048	.022	.026	.013	16.158	4.774
1972	671.8	1,461.1	.460	.041	.048	.306	.052	.023	.029	.013	16.490	5.045
1973	753.0	1,569.7	.480	.042	.049	.322	.053	.026	.027	.014	16.832	5.425
1974	812.8	1,533.4	.530	.050	.053	.363	.045	.028	.013	.018	16.331	5.930
1975	881.5	1,488.1	.592	.062	.059	.390	.062	.028	.034	.019	16.691	6.510
1976	995.5	1,583.5	.629	.065	.060	.414	.072	.033	.038	.017	16.986	7.040
1977	1,126.1	1,686.6	.668	.068	.062	.439	.080	.036	.044	.018	17.257	7.581
1978	1,274.1	1,789.8	.712	.073	.064	.473	.082	.037	.044	.020	17.358	8.219
1979	1,417.4	1,840.4	.770	.082	.066	.523	.076	.038	.038	.024	17.221	9.002
1980	1,540.8	1,807.9	.852	.095	.077	.581	.068	.037	.031	.031	17.096	9.939
1981	1,738.4	1,837.2	.946	.109	.090	.632	.078	.035	.044	.037	17.194	10.861
1982	1,782.2	1,782.2	1.000	.125	.094	.676	.063	.026	.037	.043	17.318	11.699
1983	1,914.2	1,886.0	1.026	.123	.098	.679	.089	.032	.057	.037	17.867	12.124
1984	2,146.7	2,036.5	1.054	.118	.100	.687	.109	.036	.073	.039	18.288	12.570
1985	2,282.8	2,127.1	1.073	.119	.103	.702	.107	.033	.074	.043	18.674	13.103
1986	2,376.1	2,182.2	1.089	.121	.104	.715	.103	.036	.068	.045	18.969	13.566
1987 p	2,495.4	2,240.9	1.114	.123	.106	.728	.110	.049	.061	.047		
1982: IV	1,779.4	1,760.2	1.011	.131	.096	.685	.057	.023	.034	.042	17.382	11.914
1983: IV	2,012.5	1,940.5	1.037	.120	.098	.680	.103	.036	.066	.037	18.029	12.261
1984: IV	2,201.8	2,069.5	1.064	.118	.102	.694	.107	.032	.075	.042	18.359	12.746
1985: I	2,230.9	2,091.1	1.067	.119	.102	.698	.106	.033	.072	.043	18.458	12.883
II	2,266.2	2,115.1	1.071	.119	.104	.701	.106	.031	.075	.043	18.588	13.022
III	2,312.4	2,148.7	1.076	.118	.102	.699	.114	.034	.080	.043	18.849	13.173
IV	2,321.8	2,153.5	1.078	.120	.103	.709	.103	.033	.070	.044	18.787	13.324
1986: I	2,353.3	2,176.7	1.081	.119	.104	.709	.104	.033	.071	.045	18.941	13.437
II	2,358.6	2,171.9	1.086	.121	.101	.714	.104	.034	.069	.046	18.930	13.525
III	2,387.7	2,180.8	1.095	.122	.106	.717	.104	.037	.068	.046	18.974	13.608
IV	2,404.7	2,199.3	1.093	.123	.104	.720	.102	.040	.062	.045	19.073	13.724
1987: I	2,434.8	2,207.6	1.103	.123	.105	.724	.106	.045	.061	.045	18.933	13.708
II	2,465.4	2,219.9	1.111	.124	.107	.728	.106	.047	.059	.046	18.964	13.798
III	2,521.1	2,254.4	1.118	.123	.107	.727	.114	.051	.063	.048	19.119	13.897

[1] Output is measured by gross domestic product of nonfinancial corporate business in 1982 dollars.

[2] This is equal to the deflator for gross domestic product of nonfinancial corporate business with the decimal point shifted two places to the left.

[3] Indirect business tax and nontax liability plus business transfer payments less subsidies.

[4] With inventory valuation and capital consumption adjustments.

Sources: Department of Commerce (Bureau of Economic Analysis) and Department of Labor (Bureau of Labor Statistics).

TABLE B–14.—*Personal consumption expenditures, 1940–87*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Personal consumption expenditures	Durable goods			Nondurable goods					Services					
												Household operation			
		Total [1]	Motor vehicles and parts	Furniture and household equipment	Total [1]	Food	Clothing and shoes	Gasoline and oil	Fuel oil and coal	Total [1]	Housing [2]	Total [1]	Electricity and gas	Transportation	Medical care
1940	71.0	7.8	2.8	3.8	37.0	20.2	7.5	2.3	1.5	26.2	9.7	4.0	1.5	2.1	2.2
1941	80.8	9.7	3.5	4.8	42.9	23.4	8.8	2.6	1.7	28.3	10.4	4.3	1.5	2.4	2.4
1942	88.6	6.9	.7	4.6	50.8	28.4	11.0	2.1	1.9	31.0	11.2	4.8	1.6	2.7	2.7
1943	99.5	6.5	.8	3.9	58.6	33.2	13.4	1.3	2.0	34.3	11.8	5.2	1.7	3.4	2.9
1944	108.2	6.7	.8	3.8	64.3	36.7	14.6	1.4	2.0	37.2	12.3	5.9	1.8	3.7	3.3
1945	119.6	8.0	1.0	4.5	71.9	40.6	16.5	1.8	2.2	39.7	12.8	6.4	1.9	4.0	3.6
1946	143.9	15.8	4.1	8.4	82.7	47.4	18.2	3.4	2.5	45.4	14.2	6.8	2.1	5.0	4.6
1947	161.9	20.4	6.6	10.6	90.9	52.3	18.8	4.0	3.0	50.6	16.0	7.5	2.3	5.3	5.6
1948	174.9	22.9	8.0	11.5	96.6	54.2	20.1	4.8	3.4	55.5	17.9	8.1	2.6	5.8	6.3
1949	178.3	25.0	10.6	11.3	94.9	52.5	19.3	5.3	3.1	58.4	19.6	8.5	2.9	5.9	6.5
1950	192.1	30.8	13.7	13.7	98.2	53.9	19.6	5.5	3.4	63.2	21.7	9.5	3.3	6.2	6.9
1951	208.1	29.9	12.2	14.1	109.2	60.7	21.3	6.1	3.5	69.0	24.3	10.4	3.7	6.8	7.4
1952	219.1	29.3	11.3	14.0	114.7	64.1	22.0	6.8	3.5	75.1	27.0	11.2	4.1	7.3	8.3
1953	232.6	32.7	13.9	14.7	117.8	65.4	22.2	7.4	3.4	82.1	29.9	12.1	4.5	8.0	9.3
1954	239.8	32.1	13.0	14.8	119.7	66.8	22.3	7.8	3.5	88.0	32.3	12.7	5.0	8.2	10.2
1955	257.9	38.9	17.8	16.4	124.7	68.6	23.3	8.6	3.8	94.3	34.4	14.2	5.5	8.5	10.8
1956	270.6	38.2	15.8	17.3	130.8	71.4	24.4	9.4	3.9	101.6	36.7	15.4	6.1	8.9	11.7
1957	285.3	39.7	17.3	17.2	137.1	75.1	24.5	10.2	4.1	108.5	39.3	16.3	6.5	9.4	12.8
1958	294.6	37.2	14.8	16.9	141.7	77.9	24.9	10.6	4.2	115.7	42.0	17.4	7.1	9.7	14.0
1959	316.3	42.8	18.9	18.1	148.5	80.7	26.4	11.3	4.0	125.0	45.0	18.7	7.6	10.5	15.3
1960	330.7	43.5	19.7	18.0	153.2	82.7	27.0	12.0	3.8	134.0	48.2	20.3	8.3	11.2	16.4
1961	341.1	41.9	17.8	18.3	157.4	84.8	27.6	12.0	3.8	141.8	51.2	21.2	8.8	11.7	17.5
1962	361.9	47.0	21.5	19.3	163.8	87.1	29.0	12.6	3.8	151.1	54.7	22.4	9.4	12.2	19.4
1963	381.7	51.8	24.4	20.7	169.4	89.5	29.8	13.0	4.0	160.6	58.0	23.6	9.9	12.7	21.0
1964	409.3	56.8	26.0	23.2	179.7	94.6	32.4	13.6	4.1	172.8	61.4	25.0	10.4	13.4	24.1
1965	440.7	63.5	29.9	25.1	191.9	101.0	34.1	14.8	4.4	185.4	65.4	26.5	10.9	14.5	25.9
1966	477.3	68.5	30.3	28.2	208.5	109.0	37.4	16.0	4.7	200.3	69.5	28.2	11.5	15.9	28.3
1967	503.6	70.6	20.0	30.0	216.9	112.3	39.2	17.1	4.8	216.0	74.1	30.1	12.2	17.3	31.1
1968	552.5	81.0	36.1	32.9	235.0	121.6	43.2	18.6	4.7	236.4	79.7	32.3	13.0	18.9	35.7
1969	597.9	86.2	38.4	34.7	252.2	130.5	46.5	20.5	4.6	259.4	86.8	35.0	14.0	20.9	40.9
1970	640.0	85.7	35.9	35.7	270.3	142.1	4.8	21.9	4.4	284.0	94.0	37.7	15.2	23.7	46.1
1971	691.6	97.6	44.9	37.8	283.3	147.5	51.7	23.2	4.6	310.7	102.7	40.9	16.6	27.1	51.8
1972	757.6	111.2	51.5	42.4	305.1	158.5	56.4	24.4	5.1	341.3	112.1	45.2	18.4	29.8	57.8
1973	837.2	124.7	56.7	47.9	339.6	176.1	62.5	28.1	6.3	373.0	123.1	49.6	20.0	31.2	64.4
1974	916.5	123.8	50.3	51.5	380.9	198.2	66.0	36.1	7.8	411.9	135.1	55.4	23.5	33.3	72.4
1975	1,012.8	135.4	55.8	54.5	416.2	218.7	70.8	39.7	8.4	461.2	148.4	63.5	28.5	35.7	84.2
1976	1,129.3	161.5	72.7	60.2	452.0	236.2	76.6	43.0	10.1	515.9	163.5	72.3	32.5	41.3	95.9
1977	1,257.2	184.5	85.4	67.1	490.4	255.9	84.1	46.9	11.1	582.3	182.4	81.7	37.6	49.2	111.5
1978	1,403.5	205.6	95.1	73.9	541.8	282.2	94.8	51.3	12.0	656.1	205.2	90.9	42.1	53.5	125.1
1979	1,566.8	219.0	96.9	82.1	613.2	317.3	102.2	66.1	15.8	734.6	231.1	100.3	46.8	59.0	141.4
1980	1,732.6	219.3	90.3	86.2	681.4	349.1	109.0	83.7	18.0	831.9	261.5	113.9	56.4	64.5	164.2
1981	1,915.1	239.9	100.5	92.7	740.6	376.5	119.9	92.7	19.4	934.7	295.6	127.5	63.5	68.3	193.5
1982	2,050.7	252.7	108.9	94.7	771.0	398.8	124.4	89.1	18.6	1027.0	321.1	143.4	72.8	69.7	217.8
1983	2,234.5	289.1	130.4	107.1	816.7	421.9	135.1	90.2	17.5	1,128.7	344.1	156.0	80.0	74.8	238.3
1984	2,430.5	335.5	157.4	118.8	867.3	448.5	146.7	90.0	17.8	1,227.6	371.3	166.9	84.8	82.0	265.3
1985	2,629.4	368.7	177.6	128.7	913.1	472.8	157.2	92.6	17.5	1,347.5	402.4	174.7	88.9	88.6	291.5
1986	2,799.8	402.4	194.9	139.9	939.4	497.8	167.5	75.3	16.0	1,458.0	436.9	178.6	87.6	95.1	319.8
1987 *p*	2,966.0	413.9	194.5	146.3	980.4	514.5	176.5	79.9	15.9	1,571.6	469.2	182.2	87.3	105.4	350.9
1982: IV	2,117.0	263.8	115.7	99.1	786.6	407.0	26.5	89.8	18.2	1,066.5	330.3	148.0	74.8	71.1	226.9
1983: IV	2,315.8	310.0	144.4	112.4	837.9	430.8	141.1	91.9	18.1	1,167.9	353.8	161.4	84.1	77.6	246.9
1984: IV	2,493.4	346.7	162.3	122.7	879.6	456.1	149.8	89.0	16.8	1,267.1	382.2	169.3	86.3	84.5	275.3
1985: I	2,549.9	358.2	171.1	125.0	894.4	463.5	153.2	90.6	17.0	1,297.3	388.9	172.8	90.3	86.5	278.6
II	2,602.0	362.4	173.3	127.0	910.4	471.2	155.8	94.3	17.2	1,329.2	397.3	171.0	85.5	87.9	288.6
III	2,665.4	383.7	191.9	129.5	918.4	474.9	158.8	93.5	17.5	1,363.3	407.0	175.4	88.3	89.3	294.3
IV	2,700.1	370.5	174.1	133.5	929.3	481.7	160.9	92.1	18.4	1,400.3	416.5	179.5	91.5	90.7	304.3
1986: I	2,737.9	375.9	177.4	134.7	936.8	489.4	163.4	87.7	17.4	1,425.2	424.1	175.4	86.3	93.5	310.0
II	2,765.8	386.4	184.2	138.3	934.3	494.7	167.2	74.4	16.0	1,445.1	433.4	177.8	87.0	93.9	315.8
III	2,837.1	427.6	217.0	142.9	940.0	499.6	169.8	70.6	15.5	1,469.5	440.9	181.5	89.6	95.5	323.1
IV	2,858.6	419.8	201.2	143.8	946.3	507.5	169.6	68.4	15.1	1,492.4	449.0	179.8	87.5	97.6	330.1
1987: I	2,893.8	396.1	177.6	146.0	969.9	514.8	174.0	75.8	15.4	1,527.7	456.3	176.6	84.8	102.1	338.5
II	2,943.7	409.0	189.6	146.0	982.1	515.0	175.8	80.6	16.1	1,552.6	464.1	179.6	85.8	103.7	346.8
III	3,011.3	436.8	215.2	147.9	986.4	514.0	178.7	82.7	15.6	1,588.1	472.9	186.2	90.0	106.3	355.4
IV *p*	3,015.1	413.8	195.8	145.4	983.4	514.1	177.3	80.5	16.3	1,618.0	483.5	186.3	88.7	109.6	363.1

[1] Includes other items not shown separately.

[2] Includes imputed rental value of owner-occupied housing.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–15.—*Personal consumption expenditures in 1982 dollars, 1940–87*

[Billions of 1982 dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Personal consumption expenditures	Durable goods			Nondurable goods					Services					
		Total [1]	Motor vehicles and parts	Furniture and household equipment	Total [1]	Food	Clothing and shoes	Gasoline and oil	Fuel oil and coal	Total [1]	Housing [2]	Household operation		Transportation	Medical care
												Total [1]	Electricity and gas		
1940	502.6	40.6	18.6	17.6	259.4	150.6	36.3	17.2	23.8	202.7	53.6	32.4	7.1	17.7	21.6
1941	531.1	46.2	20.6	20.4	275.6	158.3	38.9	19.2	24.6	209.3	56.0	32.0	7.3	19.7	22.4
1942	527.6	31.3	8.4	17.4	279.1	161.8	40.3	14.5	25.3	217.2	58.1	33.4	7.9	21.9	23.7
1943	539.9	28.1	7.7	14.0	284.7	166.3	43.0	9.2	25.7	227.2	59.8	31.2	8.2	26.9	24.1
1944	557.1	26.3	7.1	12.4	297.9	178.5	41.7	9.5	25.5	232.9	61.9	31.5	8.6	29.2	25.9
1945	592.7	28.7	7.4	13.7	323.5	193.0	43.4	12.5	27.2	240.5	62.6	32.4	9.2	31.0	26.5
1946	655.0	47.8	15.2	22.9	344.2	202.2	44.7	22.7	29.2	262.9	67.2	35.1	10.3	35.9	31.1
1947	666.6	56.5	21.8	25.7	337.4	193.9	42.5	24.1	30.8	272.6	72.8	37.6	11.7	35.3	33.8
1948	681.8	61.7	25.5	27.1	338.7	191.5	42.7	25.7	31.0	281.4	76.5	39.0	12.8	35.1	36.7
1949	695.4	67.8	32.7	26.4	342.3	193.6	43.0	27.9	27.3	285.3	80.9	40.1	13.7	33.2	37.8
1950	733.2	80.7	41.3	30.1	352.8	196.6	44.3	29.0	29.4	299.8	86.1	43.8	15.6	32.4	40.1
1951	748.7	74.7	36.3	28.9	362.9	202.5	43.7	31.5	29.3	311.1	91.9	46.2	17.6	33.2	42.0
1952	771.4	73.0	34.1	28.9	376.6	209.8	45.8	34.1	28.5	321.9	97.5	47.0	19.0	33.4	44.2
1953	802.5	80.2	39.9	29.9	388.2	217.7	46.2	36.0	27.6	334.1	102.5	48.9	20.4	34.2	46.6
1954	822.7	81.5	40.6	30.1	393.8	222.0	46.2	37.1	28.1	347.4	107.1	50.5	22.4	33.3	49.5
1955	873.8	96.9	51.5	33.7	413.2	231.3	48.6	40.3	29.9	363.6	112.1	55.5	24.2	34.2	51.0
1956	899.8	92.8	45.3	34.9	426.9	238.8	49.7	42.8	29.9	380.1	117.1	59.3	26.4	35.6	53.9
1957	919.7	92.4	45.8	33.7	434.7	243.5	49.3	44.4	29.7	392.6	122.6	61.2	28.0	36.2	56.8
1958	932.9	86.9	40.8	33.2	439.9	243.5	49.9	46.5	30.8	406.1	127.7	63.3	29.5	35.4	60.5
1959	979.4	96.9	47.4	35.5	455.8	252.1	52.3	48.9	29.4	426.7	133.6	65.7	31.2	36.8	64.0
1960	1,005.1	98.0	49.2	34.9	463.3	255.5	52.7	50.7	28.5	443.9	139.8	68.7	32.9	37.9	66.5
1961	1,025.2	93.6	44.6	35.3	470.1	259.7	53.7	51.0	26.7	461.4	145.7	70.9	34.6	38.2	69.1
1962	1,069.0	103.0	51.0	37.4	484.2	263.7	56.0	53.2	26.7	481.8	153.0	74.4	37.1	39.6	74.3
1963	1,108.4	111.8	56.4	39.9	494.3	266.5	56.9	54.7	28.0	502.3	159.4	77.0	38.8	41.2	79.1
1964	1,170.6	120.8	59.0	44.7	517.5	277.2	61.5	57.4	29.5	532.3	166.1	80.5	40.8	43.4	88.0
1965	1,236.4	134.6	67.5	48.5	543.2	290.4	64.0	60.2	31.0	558.5	174.4	83.9	42.7	45.5	91.4
1966	1,298.9	144.4	68.5	53.8	569.3	299.4	68.3	63.9	31.8	585.3	181.7	87.8	44.9	48.3	95.2
1967	1,337.7	146.2	67.4	55.8	579.2	304.0	68.8	66.0	31.8	612.3	189.3	91.9	47.4	51.4	98.3
1968	1,405.9	161.6	77.3	59.2	602.4	317.0	71.7	70.6	30.1	641.8	197.9	95.1	49.7	54.7	105.2
1969	1,456.7	167.8	80.4	60.9	617.2	324.3	73.0	75.2	28.6	671.7	207.6	99.3	52.4	58.1	113.6
1970	1,492.0	162.5	73.5	61.1	632.5	334.5	72.0	79.9	26.7	697.0	216.1	102.2	54.4	59.8	120.4
1971	1,538.8	178.3	86.4	63.5	640.3	335.9	75.3	83.6	25.9	720.2	224.5	103.6	55.8	62.1	128.2
1972	1,621.9	200.4	98.3	70.2	665.5	344.2	80.3	87.0	28.6	756.0	235.5	108.6	58.5	66.0	136.0
1973	1,689.6	220.3	106.7	77.9	683.2	340.8	86.0	91.7	30.9	786.1	246.5	112.6	59.8	67.8	145.4
1974	1,674.0	204.9	90.3	78.2	666.1	336.6	84.9	87.2	24.3	803.1	258.6	112.8	60.2	68.4	151.3
1975	1,711.9	205.6	91.1	75.9	676.5	346.4	88.1	89.8	24.2	829.8	265.7	117.5	63.3	69.4	159.9
1976	1,803.9	232.3	109.6	80.6	708.8	363.6	92.2	93.4	27.0	862.8	273.2	122.3	65.5	72.6	167.8
1977	1,883.9	253.9	121.2	87.3	731.4	377.1	97.4	96.4	26.1	898.5	279.6	128.2	68.1	77.8	177.8
1978	1,961.0	267.4	125.9	92.3	753.7	379.6	107.1	100.9	26.9	939.8	292.8	134.0	70.7	80.2	184.8
1979	2,004.4	266.5	119.4	97.1	766.6	387.5	112.1	97.1	26.2	971.2	304.1	138.3	71.1	82.9	192.2
1980	2,000.4	245.9	103.8	95.4	762.6	394.9	114.8	88.4	21.6	991.9	312.5	142.6	73.1	77.4	200.6
1981	2,024.2	250.8	106.3	96.5	764.4	392.5	122.2	87.8	19.2	1,009.0	318.9	142.0	72.0	73.3	212.0
1982	2,050.7	252.7	108.9	95.7	771.0	398.8	124.4	89.1	18.6	1,027.0	321.1	143.4	72.8	69.7	217.8
1983	2,146.0	283.1	126.8	106.1	800.2	414.0	132.6	93.2	18.6	1,062.7	325.4	146.2	74.2	71.4	222.3
1984	2,249.3	323.1	148.0	118.4	825.9	422.8	142.2	94.5	18.5	1,100.3	333.0	148.8	75.4	75.9	232.0
1985	2,352.6	352.7	163.6	130.2	849.5	436.5	147.9	96.5	18.9	1,150.4	341.0	151.0	77.4	81.0	240.8
1986	2,450.5	383.5	175.7	144.7	877.2	444.9	158.0	100.3	21.5	1,189.8	350.0	151.3	76.8	84.4	251.9
1987 [p]	2,495.2	388.1	169.9	152.4	875.9	440.1	159.0	100.6	21.1	1,231.2	358.8	153.7	77.7	88.2	263.3
1982: IV	2,078.7	262.0	115.0	98.4	778.6	404.6	126.2	89.7	17.6	1,038.1	322.1	143.1	71.6	69.1	220.7
1983: IV	2,191.9	300.5	138.1	111.1	812.7	418.2	137.4	94.4	19.4	1,078.6	328.2	149.4	76.9	72.6	224.6
1984: IV	2,281.1	333.1	151.6	122.7	831.2	426.2	143.5	94.7	18.0	1,116.8	335.8	148.9	75.7	78.0	235.7
1985: I	2,314.1	342.4	158.1	125.4	841.2	431.1	145.4	97.0	18.6	1,130.5	337.7	151.2	78.8	79.3	235.2
II	2,337.0	346.6	159.9	128.0	847.6	436.8	146.7	96.3	18.4	1,142.8	339.7	148.1	74.2	80.7	240.5
III	2,376.1	366.8	176.6	131.4	853.5	438.8	149.5	96.3	19.3	1,155.7	342.0	150.6	76.6	81.4	242.0
IV	2,383.2	355.1	159.9	135.9	855.7	439.4	150.1	96.4	19.4	1,172.5	344.3	154.3	80.2	82.7	245.4
1986: I	2,409.7	359.8	162.3	137.5	868.8	445.9	154.3	97.4	19.8	1,181.2	346.7	149.3	75.0	83.3	248.5
II	2,434.3	369.6	167.0	142.5	880.0	447.3	159.0	99.6	21.2	1,184.7	349.0	150.1	75.7	83.7	250.4
III	2,477.5	405.5	194.3	148.3	879.8	442.2	160.4	101.5	22.5	1,192.2	351.1	152.9	78.4	85.2	252.4
IV	2,480.5	399.0	179.1	150.7	880.3	444.0	158.4	102.5	22.3	1,201.1	353.1	152.8	78.2	85.5	256.3
1987: I	2,475.9	375.9	158.1	151.5	883.2	447.5	160.4	99.8	21.0	1,216.9	355.3	150.0	75.8	86.9	258.7
II	2,487.5	385.4	166.4	152.5	879.0	441.6	157.3	102.1	21.4	1,223.1	357.7	151.4	76.1	87.5	262.0
III	2,520.7	406.9	186.6	154.1	875.7	437.1	161.7	100.9	20.4	1,238.1	360.0	156.5	79.8	88.6	265.2
IV [p]	2,496.6	384.4	168.6	151.7	865.6	434.1	156.6	99.5	21.6	1,246.6	362.2	156.8	79.1	89.6	267.2

[1] Includes other items not shown separately.

[2] Includes imputed rental value of owner-occupied housing.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–16.—*Gross and net private domestic investment, 1929–87*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross private domestic investment	Less: Capital consumption allowances with capital consumption adjustment	Equals: Net private domestic investment						
			Total	Net fixed investment					Change in business inventories
				Total	Nonresidential			Residential	
					Total	Structures	Producers' durable equipment		
1929	16.7	9.9	6.7	5.0	3.3	1.8	1.4	1.7	1.7
1933	1.6	7.6	−6.1	−4.5	−3.5	−1.7	−1.8	−1.0	−1.6
1939	9.5	9.0	.5	.1	−.7	−1.1	.4	.8	.4
1940	13.4	9.4	4.1	1.9	.7	−.8	1.5	1.2	2.2
1941	18.3	10.3	8.0	3.5	2.0	−.3	2.3	1.5	4.5
1942	10.3	11.3	−1.0	−2.7	−2.1	−1.7	−.5	−.6	1.8
1943	6.2	11.6	−5.3	−4.7	−3.1	−2.4	−.7	−1.6	−.6
1944	7.7	12.0	−4.2	−3.2	−1.3	−1.9	.5	−1.9	−1.0
1945	11.3	12.4	−1.1	−.1	1.7	−1.0	2.8	−1.8	−1.0
1946	31.5	14.2	17.3	10.9	6.9	2.4	4.5	4.0	6.4
1947	35.0	17.6	17.5	17.9	10.7	1.9	8.7	7.3	−.5
1948	47.1	20.4	26.7	22.0	11.8	2.5	9.3	10.2	4.7
1949	36.5	22.0	14.5	17.6	8.7	2.2	6.5	8.9	−3.1
1950	55.1	23.6	31.5	24.6	10.3	2.8	7.5	14.4	6.8
1951	60.5	27.2	33.3	23.1	11.6	3.9	7.7	11.5	10.2
1952	53.5	29.2	24.4	21.3	10.1	3.8	6.4	11.2	3.1
1953	54.9	30.9	24.0	23.6	11.9	4.8	7.1	11.7	.4
1954	54.1	32.5	21.6	23.3	10.2	5.0	5.2	13.0	−1.6
1955	69.7	34.4	35.3	29.6	13.2	5.9	7.3	16.4	5.7
1956	72.7	38.1	34.6	29.9	15.6	7.9	7.7	14.4	4.6
1957	71.1	41.1	29.9	28.5	15.9	7.9	8.1	12.6	1.4
1958	63.6	42.8	20.8	22.3	9.6	6.3	3.2	12.7	−1.5
1959	80.2	44.6	35.5	29.8	12.1	6.4	5.7	17.7	5.8
1960	78.2	46.4	31.8	28.7	13.4	7.3	6.1	15.4	3.1
1961	77.1	47.8	29.4	27.0	11.9	7.3	4.6	15.1	2.4
1962	87.6	49.4	38.2	32.1	14.9	8.0	6.9	17.2	6.1
1963	93.1	51.4	41.8	35.9	16.0	7.9	8.1	19.9	5.8
1964	99.6	53.9	45.7	40.3	20.3	9.4	10.9	20.0	5.4
1965	116.2	57.4	58.8	48.9	29.3	13.2	16.1	19.6	9.9
1966	128.6	62.1	66.5	52.3	35.8	15.2	20.7	16.5	14.2
1967	125.7	67.4	58.3	48.0	32.3	14.4	18.0	15.7	10.3
1968	137.0	73.9	63.1	55.2	34.2	15.1	19.0	21.0	7.9
1969	153.2	81.4	71.8	62.0	39.8	17.4	22.4	22.2	9.8
1970	148.8	88.8	60.0	56.9	36.8	17.4	19.4	20.1	3.1
1971	172.5	97.5	74.9	67.2	34.5	16.8	17.7	32.7	7.8
1972	202.0	107.9	94.1	83.6	40.5	17.4	23.1	43.1	10.5
1973	238.8	118.1	120.7	101.1	56.2	21.7	34.4	45.0	19.6
1974	240.8	137.5	103.4	87.9	55.8	22.0	33.7	32.2	15.4
1975	219.6	161.8	57.8	63.4	37.5	15.6	21.9	25.9	−5.6
1976	277.7	179.2	98.4	82.4	40.9	16.0	24.8	41.6	16.0
1977	344.1	201.5	142.5	121.3	58.6	17.6	41.0	62.6	21.3
1978	416.8	229.9	186.9	158.3	82.2	25.0	57.2	76.1	28.6
1979	454.8	265.8	189.1	176.1	98.9	34.5	64.5	77.2	13.0
1980	437.0	303.8	133.1	141.5	88.9	39.4	49.5	52.6	−8.3
1981	515.5	347.8	167.7	143.7	98.6	51.7	46.9	45.0	24.0
1982	447.3	383.2	64.1	88.7	65.5	45.9	19.6	23.2	−24.5
1983	502.3	396.6	105.7	112.8	45.8	25.9	19.9	67.0	−7.1
1984	664.8	415.5	249.4	181.7	91.1	39.3	51.8	90.6	67.7
1985	641.6	437.6	204.0	194.0	101.5	45.5	55.9	92.5	10.0
1986	671.0	456.7	214.3	198.6	81.0	26.6	54.4	117.6	15.7
1987 ^{p}	716.4	479.4	237.0	191.3	....	....	....	....	45.7
1982: IV	409.6	393.2	16.4	76.3	....	....	....	....	−59.9
1983: IV	579.8	400.8	179.0	148.0	....	....	....	....	31.0
1984: IV	661.8	423.5	238.3	193.3	....	....	....	....	45.0
1985: I	638.6	428.2	210.4	189.0	....	....	....	....	21.4
II	648.4	433.3	215.1	196.6	....	....	....	....	18.5
III	628.6	441.6	187.0	189.4	....	....	....	....	−2.4
IV	650.8	447.2	203.6	201.1	....	....	....	....	2.5
1986: I	683.4	447.8	235.6	197.3	....	....	....	....	38.3
II	679.4	454.1	225.3	197.8	....	....	....	....	27.5
III	660.8	458.9	201.9	198.4	....	....	....	....	3.5
IV	660.2	465.9	194.3	200.7	....	....	....	....	−6.4
1987: I	699.9	469.7	230.2	178.6	....	....	....	....	51.6
II	702.6	476.6	226.0	185.7	....	....	....	....	40.3
III	707.4	483.0	224.4	201.5	....	....	....	....	22.9
IV ^{p}	755.5	488.2	267.3	199.2	....	....	....	....	68.1

Source: Department of Commerce, Bureau of Economic Analysis.

Table B–17.—*Gross and net private domestic investment in 1982 dollars, 1929–87*

[Billions of 1982 dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross private domestic investment	Less: Capital consumption allowances with capital consumption adjustment	Equals: Net private domestic investment						
			Total	Net fixed investment					Change in business inventories
				Total	Nonresidential			Residential	
					Total	Structures	Producers' durable equipment		
1929	139.2	86.8	52.4	41.6	26.2	16.8	9.4	15.4	10.8
1933	22.7	86.5	-63.8	-53.0	-40.2	-24.3	-16.0	-12.8	-10.7
1939	86.0	84.4	1.6	-2.3	-10.1	-12.0	1.9	7.8	3.9
1940	111.8	84.9	26.9	12.5	1.5	-8.5	10.0	11.1	14.4
1941	138.8	86.3	52.5	24.7	12.0	-3.5	15.6	12.7	27.8
1942	76.7	86.9	-10.2	-22.1	-17.5	-15.9	-1.6	-4.6	12.0
1943	50.4	85.7	-35.3	-36.0	-24.4	-20.7	-3.8	-11.5	.7
1944	56.4	84.8	-28.4	-23.3	-10.5	-15.2	4.7	-12.8	-5.2
1945	76.5	85.4	-8.9	-.5	10.5	-8.3	18.8	-11.0	-8.4
1946	178.1	88.0	90.1	62.2	39.5	15.4	24.1	22.7	27.9
1947	177.9	91.8	86.1	87.1	52.6	11.7	40.9	34.5	-1.0
1948	208.2	96.8	111.4	99.1	54.3	14.3	40.0	44.8	12.3
1949	168.8	101.7	67.1	76.7	37.9	12.7	25.2	38.9	-9.7
1950	234.9	106.5	128.4	104.2	43.3	15.7	27.6	60.9	24.2
1951	235.2	111.8	123.3	92.5	46.9	18.8	28.1	45.6	30.8
1952	211.8	117.0	94.8	84.8	41.7	18.8	22.9	43.2	10.0
1953	216.6	122.1	94.4	91.7	47.0	22.9	24.1	44.7	2.8
1954	212.6	127.4	85.2	90.0	40.4	24.4	16.0	49.6	-4.8
1955	259.8	132.6	127.2	110.9	49.9	27.7	22.2	60.9	16.3
1956	257.8	138.3	119.5	106.5	54.9	32.5	22.4	51.6	12.9
1957	243.4	143.5	99.9	96.9	51.7	30.7	20.9	45.2	3.0
1958	221.4	147.7	73.7	77.1	31.5	24.8	6.6	45.6	-3.4
1959	270.3	151.9	118.4	101.9	38.5	25.0	13.6	63.4	16.5
1960	260.5	156.3	104.1	96.4	41.4	27.9	13.6	55.0	7.7
1961	259.1	160.6	98.4	91.2	37.3	28.1	9.3	53.8	7.3
1962	288.6	165.1	123.5	107.3	46.4	30.3	16.0	61.0	16.2
1963	307.1	170.3	136.8	120.1	49.2	29.1	20.1	70.9	16.6
1964	325.9	176.3	149.6	133.9	63.3	34.0	29.2	70.6	15.7
1965	367.0	183.7	183.4	158.1	90.4	46.2	44.2	67.7	25.2
1966	390.5	192.2	198.3	161.4	106.3	50.4	55.8	55.1	36.9
1967	374.4	201.1	173.4	144.6	93.6	45.9	47.7	50.9	28.8
1968	391.8	209.8	181.9	160.9	96.1	46.7	49.3	64.8	21.0
1969	410.3	219.8	190.5	165.3	103.1	49.7	53.4	62.2	25.1
1970	381.5	229.8	151.8	143.6	89.3	46.1	43.3	54.2	8.2
1971	419.3	239.5	179.8	160.2	76.1	40.4	35.7	84.1	19.6
1972	465.4	253.4	212.1	190.3	85.3	39.8	45.5	105.0	21.8
1973	520.8	263.6	257.1	217.1	116.5	46.8	69.8	100.6	40.0
1974	481.3	276.1	205.3	172.0	106.9	42.5	64.4	65.1	33.3
1975	383.3	287.0	96.3	109.1	60.8	27.9	32.9	48.3	-12.8
1976	453.5	297.3	156.2	134.1	61.8	27.3	34.6	72.2	22.1
1977	521.3	309.6	211.7	182.6	85.2	28.7	56.5	97.4	29.1
1978	576.9	323.7	253.3	216.5	111.6	37.2	74.3	104.9	36.8
1979	575.2	341.3	234.0	218.9	124.3	44.8	79.5	94.6	15.0
1980	509.3	356.1	153.2	160.1	101.3	47.2	54.1	58.7	-6.9
1981	545.5	369.7	175.8	152.0	105.5	56.0	49.4	46.5	23.9
1982	447.3	383.2	64.1	88.7	65.5	45.9	19.6	23.2	-24.5
1983	504.0	394.4	109.6	116.0	50.4	26.2	24.1	65.6	-6.4
1984	658.4	407.2	251.2	188.9	103.3	39.8	63.5	85.6	62.3
1985	636.1	426.3	209.8	202.5	117.1	41.8	75.3	85.4	7.4
1986	654.0	442.0	212.0	198.2	92.3	20.2	72.2	105.9	13.8
1987 p	685.4	458.7	226.7	184.3					42.4
1982: IV	408.8	390.0	18.8	78.0					-59.3
1983: IV	577.2	397.9	179.3	152.3					27.0
1984: IV	655.7	413.5	242.2	200.5					41.7
1985: I	632.1	418.1	214.0	194.5					19.5
II	645.7	422.6	223.1	205.8					17.3
III	623.2	430.1	193.1	198.8					-5.7
IV	643.3	434.3	209.0	210.6					-1.6
1986: I	674.4	435.3	239.1	203.8					35.3
II	665.6	439.6	226.0	197.9					28.1
III	645.0	444.2	200.8	194.7					6.1
IV	631.0	449.1	181.9	196.3					-14.4
1987: I	671.8	453.2	218.6	171.0					47.6
II	673.7	456.6	217.1	178.1					39.0
III	681.9	460.4	221.5	196.9					24.6
IV p	714.2	464.6	249.6	191.3					58.3

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–18.—*Inventories and final sales of business, 1946–87*

[Billions of dollars, except as noted; seasonally adjusted]

Quarter	Inventories [1]							Final sales [3]	Inventory-final sales ratio	
	Total [2]	Farm	Nonfarm							
			Total [2]	Manufacturing	Wholesale trade	Retail trade	Other		Total	Nonfarm [4]
Fourth quarter:										
1946	71.0	19.6	51.4	24.6	10.4	12.8	3.2	15.8	4.48	3.24
1947	80.3	21.0	59.3	29.0	11.1	14.5	4.1	18.4	4.36	3.22
1948	85.6	19.3	66.3	32.2	12.5	16.6	4.5	19.8	4.33	3.35
1949	77.5	16.7	60.8	28.6	12.5	15.4	3.9	19.7	3.94	3.09
1950	96.7	22.5	74.2	34.9	14.7	19.2	4.9	21.8	4.44	3.41
1951	109.4	24.9	84.5	43.1	15.6	19.7	5.5	24.9	4.40	3.40
1952	108.6	23.3	85.3	44.0	15.6	19.4	5.6	26.4	4.11	3.23
1953	109.6	22.0	87.6	46.0	15.8	20.0	5.2	27.5	3.98	3.18
1954	107.3	21.2	86.1	43.9	16.1	20.2	5.3	28.0	3.84	3.08
1955	114.6	19.9	94.7	48.3	17.6	22.8	5.4	30.2	3.80	3.14
1956	123.4	19.9	103.5	54.0	18.9	23.7	6.2	31.9	3.87	3.24
1957	127.0	21.2	105.8	54.3	19.2	25.0	6.6	33.3	3.82	3.18
1958	126.2	22.6	103.7	52.7	19.3	25.1	6.6	34.3	3.68	3.02
1959	131.7	22.1	109.6	55.2	21.0	26.2	7.2	36.2	3.64	3.03
1960	135.5	23.3	112.2	56.2	21.3	27.5	7.2	37.5	3.61	2.99
1961	137.2	23.8	113.4	57.2	21.8	27.0	7.4	39.5	3.47	2.87
1962	143.8	25.2	118.6	60.3	22.4	28.3	7.5	41.8	3.44	2.84
1963	149.6	25.7	123.8	62.2	23.9	29.6	8.0	44.5	3.36	2.78
1964	155.3	24.5	130.9	65.9	25.2	31.0	8.8	47.1	3.30	2.78
1965	169.1	28.0	141.0	70.7	26.9	33.7	9.8	52.1	3.24	2.70
1966	185.2	27.4	157.8	80.9	30.3	36.2	10.4	55.3	3.35	2.85
1967	197.4	27.9	169.5	87.5	32.7	36.9	12.4	58.8	3.36	2.88
1968	211.8	29.1	182.6	94.0	34.6	40.7	13.3	64.8	3.27	2.82
1969	232.4	31.8	200.6	103.4	37.9	44.5	14.9	68.8	3.38	2.91
1970	240.3	31.1	209.2	105.8	41.7	45.8	16.0	72.4	3.32	2.89
1971	257.8	35.4	222.4	107.3	45.2	52.3	17.6	78.9	3.27	2.82
1972	285.6	44.3	241.3	113.6	50.0	57.7	19.9	87.7	3.26	2.75
1973	352.6	65.5	287.1	136.1	59.4	66.4	25.2	96.8	3.64	2.97
1974	423.3	62.4	360.9	177.0	75.6	74.6	33.7	104.6	4.05	3.45
1975	428.8	64.3	364.5	177.8	76.2	74.7	35.8	117.1	3.66	3.11
1976	463.3	60.2	403.1	194.9	86.1	82.7	39.4	128.5	3.60	3.14
1977	505.7	59.3	446.4	210.6	96.2	93.3	46.3	143.9	3.51	3.10
1978	588.2	73.7	514.5	238.4	113.8	107.8	54.5	165.1	3.56	3.12
1979	674.8	80.7	594.1	281.1	133.7	117.0	62.3	183.2	3.68	3.24
1980	739.3	84.5	654.8	310.7	154.8	122.7	66.7	201.1	3.68	3.26
1981	789.0	81.6	707.4	330.2	164.7	134.0	78.5	217.8	3.62	3.25
1982	771.5	79.2	692.2	316.1	162.2	134.7	79.2	229.5	3.36	3.02
1983	787.2	79.4	707.8	315.9	163.8	148.2	79.9	247.0	3.19	2.87
1984	858.2	80.9	777.3	343.4	177.5	166.7	89.6	268.8	3.19	2.89
1985	863.4	71.1	792.3	335.6	180.4	180.1	96.3	290.6	2.97	2.73
1986	863.4	66.7	796.7	324.3	181.5	189.5	101.4	304.8	2.83	2.61
1987 [p]	945.2	79.8	865.4	343.2	198.3	209.8	114.0	321.2	2.94	2.69
1982: IV	771.5	79.2	692.2	316.1	162.2	134.7	79.2	229.5	3.36	3.02
1983: IV	787.2	79.4	707.8	315.9	163.8	148.2	79.9	247.0	3.19	2.87
1984: IV	858.2	80.9	777.3	343.4	177.5	166.7	89.6	268.8	3.19	2.89
1985: I	862.1	80.1	782.0	342.6	178.5	169.4	91.6	275.9	3.12	2.83
II	862.5	77.3	785.1	340.3	179.7	171.4	93.7	279.9	3.08	2.81
III	857.2	73.2	784.0	337.2	178.9	173.4	94.5	286.8	2.99	2.73
IV	863.4	71.1	792.3	335.6	180.4	180.1	96.3	290.6	2.97	2.73
1986: I	856.9	68.5	788.4	327.6	178.7	185.8	96.4	292.8	2.93	2.69
II	861.9	70.6	791.3	325.0	179.6	187.6	99.1	296.7	2.91	2.67
III	863.3	71.2	792.1	323.9	181.6	187.1	99.5	302.3	2.86	2.62
IV	863.4	66.7	796.7	324.3	181.5	189.5	101.4	304.8	2.83	2.61
1987: I	884.6	69.4	815.2	327.7	185.2	197.8	104.5	306.1	2.89	2.66
II	906.9	76.3	830.5	329.3	189.8	204.3	107.2	312.1	2.91	2.66
III	921.4	79.3	842.1	336.6	192.2	203.2	110.2	319.6	2.88	2.63
IV [p]	945.2	79.8	865.4	343.2	198.3	209.8	114.0	321.2	2.94	2.69

[1] End of quarter.

[2] Beginning 1959, inventories of construction establishments are included in "other" nonfarm inventories. Prior to 1959, they are included in total and total nonfarm inventories, but not in the detailed categories shown.

[3] Quarterly totals at monthly rates. Business final sales equals final sales less gross product of households and institutions, government, and rest of the world, and includes a small amount of final sales by farms.

[4] Ratio based on total business final sales, which includes a small amount of final sales by farms.

Note.—The industry classification of inventories is on an establishment basis and is based on the 1972 Standard Industrial Classification (SIC) beginning 1948 and on the 1942 SIC prior to 1948.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B-19.—*Inventories and final sales of business in 1982 dollars, 1947–87*

[Billions of 1982 dollars, except as noted; seasonally adjusted]

Quarter	Inventories[1]							Final sales[3]	Inventory-final sales ratio	
	Total[2]	Farm	Nonfarm						Total	Nonfarm[4]
			Total[2]	Manufacturing	Wholesale trade	Retail trade	Other			
Fourth quarter:										
1947	251.3	43.3	208.0	105.1	39.9	39.6	23.5	74.8	3.36	2.78
1948	263.5	45.4	218.1	108.6	42.7	43.7	23.1	77.1	3.42	2.83
1949	253.9	44.4	209.5	102.9	42.8	42.8	21.1	77.3	3.28	2.71
1950	278.1	47.7	230.4	109.8	47.6	49.5	23.4	82.6	3.37	2.79
1951	308.9	51.5	257.4	133.2	49.0	49.6	25.6	90.4	3.42	2.85
1952	318.9	54.6	264.3	139.0	50.0	49.6	25.8	93.9	3.40	2.81
1953	321.6	54.3	267.4	142.7	50.4	50.8	23.5	98.0	3.28	2.73
1954	316.9	55.9	260.9	135.0	51.1	51.2	23.6	97.7	3.24	2.67
1955	333.2	56.0	277.1	142.5	54.8	57.1	22.7	102.5	3.25	2.70
1956	346.1	53.7	292.4	153.2	56.6	57.8	24.8	104.7	3.31	2.79
1957	349.1	54.9	294.2	152.1	56.0	59.8	26.3	105.9	3.30	2.78
1958	345.7	57.3	288.4	146.8	56.0	59.4	26.3	107.7	3.21	2.68
1959	362.2	58.1	304.2	153.5	60.7	61.9	28.1	111.4	3.25	2.73
1960	370.0	59.4	310.5	154.7	61.8	65.2	28.8	114.1	3.24	2.72
1961	377.2	60.8	316.5	158.8	63.1	64.2	30.3	118.7	3.18	2.67
1962	393.4	63.5	329.9	167.2	65.0	67.5	30.1	123.4	3.19	2.67
1963	410.1	65.8	344.2	172.6	68.9	70.3	32.4	130.4	3.14	2.64
1964	425.8	64.0	361.8	180.9	72.6	73.4	34.9	136.3	3.12	2.65
1965	451.0	66.3	384.7	191.6	76.5	79.2	37.4	147.7	3.05	2.60
1966	487.9	66.1	421.7	213.6	85.1	84.3	38.7	150.2	3.25	2.81
1967	516.6	67.7	449.0	229.2	90.7	84.2	45.0	156.4	3.30	2.87
1968	537.7	68.2	469.4	239.0	93.5	90.5	46.5	163.7	3.28	2.87
1969	562.8	69.0	493.8	248.5	98.9	96.4	50.0	165.4	3.40	2.98
1970	571.1	69.8	501.2	248.3	105.8	96.6	50.5	166.8	3.42	3.00
1971	590.7	73.4	517.3	246.1	110.7	107.2	53.2	172.6	3.42	3.00
1972	612.4	75.9	536.6	251.7	114.0	114.0	56.9	185.4	3.30	2.89
1973	652.5	81.4	571.0	267.9	118.4	122.1	62.6	188.9	3.45	3.02
1974	685.7	81.3	604.5	288.5	128.4	121.1	66.4	184.3	3.72	3.28
1975	673.0	82.6	590.3	281.9	124.0	115.9	68.6	191.5	3.51	3.08
1976	695.1	79.1	616.1	294.0	131.2	122.3	68.5	199.3	3.49	3.09
1977	724.2	77.2	647.0	301.9	140.5	130.9	73.7	209.0	3.47	3.10
1978	761.0	77.8	683.2	314.1	151.6	139.1	78.4	221.5	3.44	3.08
1979	776.0	82.4	693.6	324.7	156.1	136.7	76.1	225.6	3.44	3.08
1980	769.1	77.8	691.4	326.8	161.6	130.4	72.7	225.3	3.41	3.07
1981	793.0	82.6	710.3	330.3	165.0	135.5	79.5	224.6	3.53	3.16
1982	768.4	81.2	687.2	315.2	161.5	132.9	77.6	226.1	3.40	3.04
1983	762.0	74.9	687.2	309.3	157.9	142.4	77.5	235.5	3.24	2.92
1984	824.2	79.4	744.8	330.0	171.0	157.8	86.0	248.4	3.32	3.00
1985	831.7	74.8	756.9	322.2	173.6	168.2	92.9	261.3	3.18	2.90
1986	845.8	73.2	772.5	317.0	177.6	174.8	103.2	269.4	3.14	2.87
1987 p	888.1	82.5	805.6	322.7	184.9	188.1	109.9	275.1	3.23	2.93
1982: IV	768.4	81.2	687.2	315.2	161.5	132.9	77.6	226.1	3.40	3.04
1983: IV	762.0	74.9	687.2	309.3	157.9	142.4	77.5	235.5	3.24	2.92
1984: IV	824.2	79.4	744.8	330.0	171.0	157.8	86.0	248.4	3.32	3.00
1985: I	829.1	80.4	748.8	329.4	171.4	159.5	88.4	253.3	3.27	2.96
II	833.5	81.6	751.9	327.5	173.2	161.2	90.0	254.9	3.27	2.95
III	832.1	79.3	752.7	325.2	173.0	163.3	91.3	259.7	3.20	2.90
IV	831.7	74.8	756.9	322.2	173.6	168.2	92.9	261.3	3.18	2.90
1986: I	840.6	74.8	765.7	321.0	175.2	174.2	95.4	262.1	3.21	2.92
II	847.6	75.9	771.8	320.2	176.3	175.1	100.1	263.6	3.22	2.93
III	849.3	77.4	771.9	318.2	179.0	173.1	101.6	266.2	3.19	2.90
IV	845.8	73.2	772.5	317.0	177.6	174.8	103.2	269.4	3.14	2.87
1987: I	857.7	74.1	783.5	318.3	179.2	181.1	104.9	267.3	3.21	2.93
II	867.4	78.2	789.2	317.2	180.6	185.0	106.4	270.0	3.21	2.92
III	873.6	81.3	792.2	320.2	181.0	183.0	108.0	274.6	3.18	2.88
IV p	888.1	82.5	805.6	322.7	184.9	188.1	109.9	275.1	3.23	2.93

---

[1] End of quarter.

[2] Beginning 1959, inventories of construction establishments are included in "other" nonfarm inventories. Prior to 1959, they are included in total and total nonfarm inventories, but not in the detailed categories shown.

[3] Quarterly totals at monthly rates. Business final sales equals final sales less gross product of households and institutions, government, and rest of world, and includes a small amount of final sales by farms.

[4] Ratio based on total business final sales, which includes a small amount of final sales by farms.

Note.—The industry classification of inventories is on an establishment basis and is based on the 1972 Standard Industrial Classification (SIC) beginning 1948 and on the 1942 SIC prior to 1948.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–20.—*Foreign transactions in the national income and product accounts, 1929–87*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Receipts from foreigners					Payments to foreigners								
	Total	Exports of goods and services			Capital grants received by the United States (net)	Total	Imports of goods and services			Transfer payments (net)			Interest paid by government to foreigners	Net foreign investment
		Total	Merchandise	Services			Total	Merchandise	Services	Total	From persons (net)	From government (net)		
1929	7.1	7.1	5.3	1.7	....	7.1	5.9	4.5	1.5	0.4	0.3	0.0	0.0	0.8
1933	2.4	2.4	1.7	.7	....	2.4	2.1	1.5	.6	.2	.2	.0	.0	.2
1939	4.6	4.6	3.3	1.3	....	4.6	3.4	2.4	1.0	.2	.2	.0	.0	1.0
1940	5.4	5.4	4.1	1.3	....	5.4	3.7	2.7	1.0	.2	.2	.0	.0	1.5
1941	6.1	6.1	4.5	1.6	....	6.1	4.7	3.4	1.3	.2	.2	.0	.0	1.3
1942	5.0	5.0	3.4	1.6	....	5.0	4.8	2.7	2.1	.2	.1	.1	.0	−.1
1943	4.6	4.6	2.9	1.7	....	4.6	6.5	3.4	3.1	.2	.2	−.1	.0	−2.1
1944	5.5	5.5	3.6	1.9	....	5.5	7.2	3.8	3.4	.3	.4	−.1	.0	−2.0
1945	7.4	7.4	5.4	2.1	....	7.4	7.9	3.9	4.0	.8	.5	.4	.0	−1.3
1946	15.2	15.2	11.8	3.4	....	15.2	7.3	5.1	2.3	2.9	.7	2.3	.0	4.9
1947	20.3	20.3	16.1	4.2	....	20.3	8.3	6.0	2.4	2.6	.7	2.0	.0	9.3
1948	17.5	17.5	13.3	4.3	....	17.5	10.6	7.6	3.0	4.5	.7	3.9	.0	2.4
1949	16.4	16.4	12.2	4.1	....	16.4	9.8	6.9	2.9	5.6	.5	5.1	.0	.9
1950	14.5	14.5	10.2	4.3	....	14.5	12.3	9.1	3.2	4.0	.4	3.6	.0	−1.8
1951	19.8	19.8	14.2	5.5	....	19.8	15.3	11.2	4.1	3.5	.4	3.1	.0	.9
1952	19.2	19.2	13.4	5.8	....	19.2	16.0	10.8	5.2	2.5	.4	2.1	.1	.6
1953	18.1	18.1	12.4	5.7	....	18.1	16.8	11.0	5.8	2.5	.5	2.0	.1	−1.3
1954	18.8	18.8	12.9	5.9	....	18.8	16.3	10.4	5.9	2.3	.5	1.8	.1	.2
1955	21.1	21.1	14.4	6.7	....	21.1	18.1	11.5	6.6	2.5	.4	2.1	.1	.4
1956	25.2	25.2	17.6	7.6	....	25.2	19.9	12.8	7.1	2.4	.5	1.9	.2	2.8
1957	28.2	28.2	19.6	8.7	....	28.2	20.9	13.3	7.6	2.3	.5	1.8	.2	4.8
1958	24.4	24.4	16.4	8.0	....	24.4	21.1	13.0	8.1	2.3	.4	1.8	.1	.9
1959	25.0	25.0	16.5	8.5	....	25.0	23.5	15.3	8.2	2.3	.4	1.9	.3	−1.2
1960	29.9	29.9	20.5	9.4	....	29.9	24.0	15.2	8.8	2.4	.4	1.9	.3	3.2
1961	31.1	31.1	20.9	10.1	....	31.1	23.9	15.1	8.8	2.7	.5	2.2	.3	4.2
1962	33.1	33.1	21.7	11.4	....	33.1	26.2	16.9	9.3	2.8	.5	2.3	.3	3.8
1963	35.7	35.7	23.3	12.3	....	35.7	27.5	17.7	9.7	2.9	.6	2.3	.4	4.9
1964	40.5	40.5	26.7	13.8	....	40.5	29.6	19.4	10.2	3.0	.7	2.3	.5	7.5
1965	42.9	42.9	27.8	15.1	....	42.9	33.2	22.2	11.0	3.0	.7	2.3	.5	6.2
1966	46.6	46.6	30.7	15.8	....	46.6	39.1	26.3	12.7	3.1	.7	2.4	.5	3.8
1967	49.5	49.5	32.2	17.3	....	49.5	42.1	27.8	14.4	3.3	.9	2.4	.6	3.5
1968	54.8	54.8	35.3	19.5	....	54.8	49.3	33.9	15.4	3.2	.9	2.3	.7	1.6
1969	60.4	60.4	38.3	22.1	....	60.4	54.7	36.8	17.9	3.2	1.0	2.2	.8	1.7
1970	69.8	68.9	44.5	24.4	0.9	69.8	60.5	40.9	19.6	3.5	1.2	2.3	1.0	4.8
1971	73.1	72.4	45.6	26.8	.7	73.1	66.1	46.6	19.5	3.9	1.2	2.7	1.8	1.3
1972	82.1	81.4	51.7	29.6	.7	82.1	78.2	56.9	21.3	4.1	1.1	2.9	2.7	−2.9
1973	114.1	114.1	73.9	40.2	0	114.1	97.3	71.8	25.5	4.1	1.3	2.9	3.8	8.8
1974	149.5	151.5	101.0	50.5	−2.0	149.5	135.2	104.5	30.7	4.6	1.0	3.6	4.3	5.4
1975	161.3	161.3	109.6	51.7	0	161.3	130.3	99.0	31.3	4.9	1.0	4.0	4.5	21.6
1976	177.7	177.7	117.5	60.2	0	177.7	158.9	124.3	34.6	5.4	1.0	4.4	4.5	9.0
1977	191.6	191.6	123.1	68.6	0	191.6	189.7	151.9	37.9	5.1	.9	4.2	5.5	−8.7
1978	227.5	227.5	144.7	82.8	0	227.5	223.4	176.5	46.9	5.6	.9	4.7	8.7	−10.1
1979	292.4	291.2	183.3	107.9	1.1	292.4	272.5	211.9	60.5	6.2	1.0	5.2	11.1	2.6
1980	352.1	351.0	225.1	125.9	1.2	352.1	318.9	247.5	71.4	7.7	1.1	6.5	12.6	13.0
1981	383.9	382.8	238.3	144.5	1.1	383.9	348.9	266.5	82.4	7.5	1.0	6.5	16.9	10.6
1982	361.9	361.9	214.0	148.0	0	361.9	335.6	249.5	86.1	9.0	1.3	7.8	18.3	−1.0
1983	352.5	352.5	206.1	146.4	0	352.5	358.7	271.3	87.3	9.5	1.0	8.5	17.8	−33.5
1984	383.5	383.5	224.1	159.4	0	383.5	442.4	334.3	108.2	12.3	1.5	10.7	19.8	−90.9
1985	369.9	369.9	220.8	149.1	0	369.9	449.2	341.0	108.2	15.4	2.0	13.4	21.3	−115.9
1986	376.2	376.2	224.9	151.3	0	376.2	481.7	367.5	114.2	15.7	1.7	14.0	22.6	−143.9
1987 ^{p}	426.7	426.7	257.6	169.1	0	426.7	546.7	410.6	136.0	12.8	1.5	11.4	24.0	−156.8
1982: IV	335.9	335.9	196.3	139.6	0	335.9	321.9	239.9	82.0	10.6	1.1	9.5	18.9	−15.4
1983: IV	364.7	364.7	215.6	149.1	0	364.7	390.5	298.3	92.2	13.4	1.2	12.2	18.3	−57.4
1984: IV	385.7	385.7	228.0	157.7	0	385.7	453.6	342.7	110.9	17.0	1.6	15.5	21.2	−106.1
1985: I	376.3	376.3	225.0	151.3	0	376.3	427.7	321.5	106.3	13.3	2.1	11.1	21.2	−85.9
II	370.6	370.6	221.6	149.0	0	370.6	447.8	339.8	108.0	14.1	1.7	12.5	21.1	−112.5
III	364.2	364.2	218.0	146.2	0	364.2	448.9	341.0	107.9	16.7	2.2	14.5	21.5	−122.9
IV	368.7	368.7	218.6	150.2	0	368.7	472.2	361.8	110.4	17.4	1.9	15.5	21.5	−142.3
1986: I	373.5	373.5	220.7	152.8	0	373.5	467.3	354.0	113.3	12.2	1.7	10.4	22.5	−128.5
II	371.3	371.3	221.4	149.8	0	371.3	472.1	357.9	114.3	16.7	1.6	15.1	22.2	−139.8
III	376.6	376.6	225.7	150.8	0	376.6	487.1	375.4	111.7	17.4	1.6	15.8	22.8	−150.7
IV	383.3	383.3	231.7	151.6	0	383.3	500.2	382.8	117.5	16.6	1.9	14.7	22.9	−156.5
1987: I	397.3	397.3	235.6	161.7	0	397.3	509.5	386.1	123.4	12.4	1.7	10.7	23.1	−147.7
II	416.5	416.5	247.4	169.0	0	416.5	534.8	401.8	133.0	11.6	1.2	10.5	24.5	−154.5
III	439.2	439.2	267.2	171.9	0	439.2	562.9	421.7	141.1	11.0	1.2	9.8	24.3	−159.0
IV ^{p}	453.9	453.9	280.1	173.8	0	453.9	579.4	432.9	146.5	16.2	1.7	14.4	24.2	−165.9

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B-21.—*Exports and imports of goods and services in 1982 dollars, 1929–87*

[Billions of 1982 dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Exports of goods and services							Imports of goods and services						
	Total	Merchandise			Services			Total	Merchandise			Services		
		Total	Durable goods	Nondurable goods	Total	Factor income [1]	Other		Total	Durable goods	Nondurable goods	Total	Factor income [1]	Other
1929	42.1	29.7	12.3	17.5	12.3	7.6	4.8	37.4	29.3	7.4	22.0	8.0	2.6	5.4
1933	22.7	15.9	4.5	11.4	6.8	3.7	3.1	24.2	19.2	4.0	15.2	4.9	1.3	3.6
1939	36.2	26.5	13.3	13.1	9.8	5.2	4.5	30.1	24.0	6.9	17.0	6.1	2.2	4.0
1940	40.0	30.5	18.9	11.6	9.4	4.6	4.8	31.7	25.6	8.8	16.8	6.2	2.0	4.1
1941	42.0	31.7	20.2	11.6	10.3	5.2	5.1	38.2	29.4	11.0	18.4	8.8	1.9	6.9
1942	29.1	19.5	13.4	6.1	9.6	4.8	4.9	36.9	21.0	6.7	14.3	15.8	1.7	14.2
1943	25.1	15.2	10.5	4.8	9.8	4.6	5.2	48.0	25.0	6.5	18.5	23.0	1.9	21.2
1944	27.3	16.4	11.0	5.4	10.9	4.9	6.0	51.1	26.5	6.7	19.7	24.6	2.1	22.5
1945	35.2	24.0	12.6	11.3	11.2	4.8	6.5	54.1	26.0	6.9	19.1	28.2	2.5	25.7
1946	69.0	54.1	23.1	31.0	14.9	5.6	9.4	42.0	30.0	7.8	22.2	12.0	1.9	10.1
1947	82.3	65.5	34.4	31.1	16.9	7.2	9.7	39.9	29.3	7.8	21.5	10.6	2.1	8.5
1948	66.2	49.1	24.5	24.6	17.1	8.5	8.6	47.1	33.9	9.4	24.5	13.1	2.3	10.8
1949	65.0	48.4	24.1	24.2	16.7	8.2	8.5	46.2	33.3	8.9	24.4	13.0	2.6	10.4
1950	59.2	42.2	21.0	21.3	17.0	9.1	7.9	54.6	40.9	11.5	29.5	13.6	2.8	10.8
1951	72.0	51.1	23.8	27.3	20.9	10.9	10.0	57.4	40.4	11.5	28.9	17.1	3.1	14.0
1952	70.1	49.0	25.3	23.7	21.2	11.3	9.9	63.3	41.9	13.0	28.9	21.4	2.9	18.4
1953	66.9	46.4	25.8	20.6	20.5	11.0	9.5	69.7	44.6	13.7	30.9	25.1	3.1	21.9
1954	70.0	48.8	26.9	21.9	21.2	11.6	9.6	67.5	42.1	11.9	30.3	25.4	3.3	22.1
1955	76.9	53.2	30.3	22.9	23.7	13.0	10.7	76.9	48.3	14.7	33.5	28.6	3.6	25.0
1956	87.9	61.8	34.4	27.4	26.1	14.1	12.0	83.6	53.6	16.8	36.8	30.0	3.4	26.6
1957	94.9	66.6	37.2	29.4	28.3	14.8	13.5	87.9	56.1	17.1	39.0	31.8	3.4	28.4
1958	82.4	56.6	31.0	25.6	25.8	13.2	12.6	92.8	58.1	16.9	41.3	34.6	3.7	30.9
1959	83.7	56.1	30.5	25.6	27.6	14.0	13.5	101.9	68.0	22.8	45.3	33.8	4.0	29.8
1960	98.4	68.8	37.9	30.9	29.6	15.7	13.9	102.4	67.5	21.7	45.8	34.9	4.6	30.3
1961	100.7	69.1	38.0	31.1	31.6	16.9	14.7	103.3	69.0	21.1	47.9	34.3	4.8	29.6
1962	106.9	72.2	39.8	32.4	34.7	18.5	16.2	114.4	78.9	24.8	54.0	35.5	4.6	30.9
1963	114.7	77.6	42.1	35.5	37.1	20.0	17.2	116.6	81.2	26.2	55.0	35.4	5.1	30.3
1964	128.8	87.7	48.2	39.5	41.1	21.8	19.3	122.8	86.3	29.0	57.4	36.5	5.6	30.9
1965	132.0	88.2	50.0	38.2	43.8	23.2	20.6	134.7	97.0	35.6	61.4	37.7	6.2	31.6
1966	138.4	94.0	53.6	40.4	44.4	22.8	21.6	152.1	109.1	44.0	65.2	43.0	7.0	36.0
1967	143.6	96.5	58.8	37.7	47.1	23.8	23.3	160.5	113.0	48.0	65.0	47.5	7.5	40.0
1968	155.7	104.9	64.8	40.1	50.8	26.3	24.5	185.3	135.7	61.7	74.0	49.6	8.6	41.0
1969	165.0	110.0	69.5	40.5	55.0	29.0	26.0	199.9	144.6	65.6	79.0	55.2	12.0	43.2
1970	178.3	120.6	74.3	46.3	57.6	29.6	28.0	208.3	150.9	66.8	84.1	57.4	12.5	45.0
1971	179.2	119.3	72.9	46.4	59.9	30.5	29.4	218.9	166.2	74.4	91.8	52.7	9.8	42.9
1972	195.2	131.3	80.0	51.3	64.0	33.9	30.1	244.6	190.7	84.4	106.4	53.9	10.2	43.7
1973	242.3	160.6	99.3	61.3	81.7	46.2	35.4	273.8	218.2	88.9	129.4	55.6	13.9	41.7
1974	269.1	175.8	113.9	62.0	93.3	53.5	39.8	268.4	211.8	89.2	122.5	56.6	17.7	38.9
1975	259.7	171.5	112.1	59.5	88.2	45.6	42.6	240.8	187.9	72.4	115.5	52.9	16.3	36.6
1976	274.4	177.5	112.9	64.7	96.8	49.7	47.1	285.4	229.3	88.5	140.8	56.1	16.7	39.3
1977	281.6	178.1	111.2	66.9	103.6	53.5	50.1	317.1	259.4	99.3	160.1	57.7	16.1	41.6
1978	312.6	196.2	121.9	74.3	116.4	63.2	53.2	339.4	274.1	113.7	160.4	65.3	21.1	44.2
1979	356.8	218.2	136.6	81.6	138.6	86.6	52.0	353.2	277.9	115.7	162.2	75.3	30.8	44.5
1980	388.9	241.8	150.0	91.9	147.1	91.4	55.7	332.0	253.6	116.1	137.5	78.4	35.9	42.4
1981	392.7	238.5	143.8	94.6	154.3	96.3	57.9	343.4	258.7	126.1	132.6	84.7	41.1	43.6
1982	361.9	214.0	121.9	92.1	148.0	91.6	56.3	335.6	249.5	125.3	124.2	86.1	40.5	45.7
1983	348.1	207.6	119.6	88.0	140.5	85.0	55.5	368.1	282.2	150.4	131.9	85.8	37.1	48.7
1984	371.8	223.8	132.3	91.5	148.0	92.6	55.4	455.8	351.1	201.6	149.5	104.7	48.7	56.0
1985	365.3	231.1	142.2	88.9	134.3	79.2	55.0	473.6	370.2	219.2	150.9	103.4	43.3	60.1
1986	377.4	244.6	153.1	91.5	132.8	74.5	58.2	523.2	420.2	248.1	172.1	103.0	44.8	58.2
1987 ^{p}	425.8	282.0	177.2	104.8	143.9	78.2	65.7	560.1	443.5	263.2	180.3	116.7	55.9	60.7
1982: IV	336.0	199.1	110.8	88.3	136.9	83.0	53.8	324.3	242.7	117.1	125.6	81.6	35.1	46.5
1983: IV	355.5	214.4	126.3	88.1	141.1	88.2	52.9	401.6	311.6	172.5	139.1	90.1	39.7	50.3
1984: IV	376.6	231.9	138.2	93.7	144.7	89.5	55.2	471.4	364.2	211.4	152.8	107.2	47.4	59.8
1985: I	369.7	231.9	140.7	91.2	137.8	80.9	56.9	450.7	347.6	209.6	138.0	103.1	43.8	59.3
II	364.7	230.2	142.9	87.2	134.5	80.4	54.1	472.4	368.4	216.5	151.9	104.0	43.9	60.1
III	360.5	229.5	142.4	87.1	131.0	77.2	53.8	475.4	372.4	221.4	151.0	103.0	43.2	59.8
IV	366.5	232.7	142.7	90.0	133.8	78.5	55.3	495.8	392.3	229.3	162.9	103.5	42.2	61.4
1986: I	371.5	235.7	147.1	88.6	135.8	79.8	56.0	494.4	390.5	235.5	154.9	104.0	44.4	59.6
II	370.2	238.1	151.3	86.8	132.1	75.2	56.9	517.0	413.4	246.6	166.8	103.6	46.8	56.8
III	379.6	248.1	154.2	93.9	131.5	72.6	58.9	541.2	441.1	254.6	186.6	100.1	41.5	58.6
IV	388.3	256.7	159.8	96.9	131.7	70.7	61.0	540.1	435.7	255.7	179.9	104.5	46.5	58.0
1987: I	397.8	258.7	161.7	96.9	139.2	74.7	64.5	533.0	425.2	253.5	171.7	107.8	48.1	59.7
II	414.5	270.5	166.9	103.6	144.0	77.9	66.1	547.2	432.8	258.3	174.5	114.4	54.0	60.4
III	437.1	291.4	181.7	109.7	145.7	78.7	67.1	575.6	454.9	266.2	188.8	120.6	58.7	62.0
IV ^{p}	453.8	307.3	198.2	109.1	146.5	81.3	65.2	584.5	460.9	274.7	186.3	123.6	62.7	60.9

[1] Factor income exports less factor income imports equals rest-of-the-world product.

Source: Department of Commerce, Bureau of Economic Analysis.

Table B–22.—*Relation of gross national product, net national product, and national income, 1929–87*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross national product	Less: Capital consumption allowances with capital consumption adjustment	Equals: Net national product	Less:			Plus: Subsidies less current surplus of government enterprises	Equals: National income
				Indirect business tax and nontax liability	Business transfer payments	Statistical discrepancy		
1929	103.9	9.9	94.0	7.1	0.6	1.5	−0.2	84.7
1933	56.0	7.6	48.4	7.1	.7	1.2	.0	39.4
1939	91.3	9.0	82.3	9.4	.5	1.7	.4	71.2
1940	100.4	9.4	91.1	10.1	.4	1.4	.4	79.6
1941	125.5	10.3	115.3	11.3	.5	.7	.1	102.8
1942	159.0	11.3	147.7	11.8	.5	−.7	.1	136.2
1943	192.7	11.6	181.1	12.8	.5	−1.7	.1	169.7
1944	211.4	12.0	199.4	14.2	.5	2.7	.6	182.6
1945	213.4	12.4	201.0	15.5	.5	4.0	.7	181.6
1946	212.4	14.2	198.2	17.1	.5	.7	.9	180.7
1947	235.2	17.6	217.6	18.4	.6	1.8	−.2	196.6
1948	261.6	20.4	241.2	20.1	.7	−1.3	−.1	221.5
1949	260.4	22.0	238.4	21.3	.8	.8	−.3	215.2
1950	288.3	23.6	264.6	23.4	.8	.8	.1	239.8
1951	333.4	27.2	306.2	25.3	.9	2.7	−.1	277.3
1952	351.6	29.2	322.5	27.7	1.0	1.8	−.3	291.6
1953	371.6	30.9	340.7	29.7	1.2	2.6	−.5	306.6
1954	372.5	32.5	340.0	29.6	1.1	2.7	−.3	306.3
1955	405.9	34.4	371.5	32.2	1.2	1.8	.0	336.3
1956	428.2	38.1	390.1	35.0	1.4	−1.9	.7	356.3
1957	451.0	41.1	409.9	37.4	1.5	−1.2	.7	372.8
1958	456.8	42.8	414.0	38.6	1.6	−.1	1.1	375.0
1959	495.8	44.6	451.2	41.7	1.8	−1.5	.1	409.2
1960	515.3	46.4	468.9	45.3	2.0	−2.8	.4	424.9
1961	533.8	47.8	486.1	48.0	2.0	−1.2	1.7	439.0
1962	574.6	49.4	525.2	51.5	2.1	.0	1.8	473.3
1963	606.9	51.4	555.5	54.6	2.4	−.6	1.1	500.3
1964	649.8	53.9	595.9	58.7	2.7	−1.4	1.7	537.6
1965	705.1	57.4	647.7	62.5	2.8	−1.2	1.6	585.2
1966	772.0	62.1	709.9	65.2	3.0	2.1	2.5	642.0
1967	816.4	67.4	749.0	70.1	3.1	−.4	1.6	677.7
1968	892.7	73.9	818.7	78.7	3.4	−1.1	1.4	739.1
1969	963.9	81.4	882.5	86.3	3.9	−3.9	1.9	798.1
1970	1,015.5	88.8	926.6	94.0	4.1	−1.1	2.9	832.6
1971	1,102.7	97.5	1,005.1	103.4	4.4	1.8	2.6	898.1
1972	1,212.8	107.9	1,104.8	111.1	4.9	−1.6	3.7	994.1
1973	1,359.3	118.1	1,241.2	120.8	5.5	−4.3	3.5	1,122.7
1974	1,472.8	137.5	1,335.4	129.0	5.8	−1.7	1.2	1,203.5
1975	1,598.4	161.8	1,436.6	140.0	7.4	2.5	2.4	1,289.1
1976	1,782.8	179.2	1,603.6	151.7	7.9	3.6	1.0	1,441.4
1977	1,990.5	201.5	1,789.0	165.7	8.6	.0	3.0	1,617.8
1978	2,249.7	229.9	2,019.8	178.1	9.3	−1.9	3.9	1,838.2
1979	2,508.2	265.8	2,242.4	189.4	10.3	−1.0	3.5	2,047.3
1980	2,732.0	303.8	2,428.1	213.3	12.1	4.9	5.7	2,203.5
1981	3,052.6	347.8	2,704.8	251.5	12.4	4.1	6.7	2,443.5
1982	3,166.0	383.2	2,782.8	258.8	14.3	−.1	8.7	2,518.4
1983	3,405.7	396.6	3,009.1	282.6	16.0	5.2	14.1	2,719.5
1984	3,772.2	415.5	3,356.8	313.9	18.7	5.4	9.9	3,028.6
1985	4,010.3	437.6	3,572.7	333.2	21.6	−5.6	6.3	3,229.9
1986	4,235.0	456.7	3,778.4	347.7	22.3	−4.9	8.7	3,422.0
1987 ᵖ	4,486.2	479.4	4,006.8	367.6	23.2	−6.8	13.1	3,635.9
1982: IV	3,212.5	393.2	2,819.3	264.5	15.2	6.8	15.4	2,548.2
1983: IV	3,545.8	400.8	3,145.0	294.1	16.5	2.5	19.6	2,851,5
1984: IV	3,851.8	423.5	3,428.3	322.7	20.0	−2.1	8.4	3,096.1
1985: I	3,921.1	428.2	3,492.9	325.9	21.1	.7	11.2	3,156.5
II	3,973.6	433.3	3,540.3	334.9	21.6	−11.9	8.8	3,204.4
III	4,042.0	441.6	3,600.4	334.4	21.8	−9.1	1.1	3,254.4
IV	4,104.4	447.2	3,657.2	337.3	21.9	−2.3	4.2	3,304.4
1986: I	4,174.4	447.8	3,726.6	345.6	22.0	−2.9	2.3	3,364.2
II	4,211.6	454.1	3,757.5	340.7	22.2	.9	20.4	3,414.1
III	4,265.9	458.9	3,807.0	352.8	22.4	−6.1	.7	3,438.7
IV	4,288.1	465.9	3,822.3	351.9	22.6	−11.6	11.6	3,471.0
1987: I	4,377.7	469.7	3,907.9	358.3	22.8	−2.2	19.3	3,548.3
II	4,445.1	476.6	3,968.5	365.2	23.1	−3.1	9.9	3,593.3
III	4,524.0	483.0	4,040.9	371.8	23.3	−10.9	2.3	3,659.0
IV ᵖ	4,598.0	488.2	4,109.8	375.1	23.6	....	21.0	....

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–23.—*Relation of national income and personal income, 1929–87*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	National income	Less:				Plus:				Equals:
		Corporate profits with inventory valuation and capital consumption adjustments	Net interest	Contributions for social insurance	Wage accruals less disbursements	Government transfer payments to persons	Personal interest income	Personal dividend income	Business transfer payments	Personal income
1929	84.7	9.6	4.7	0.3	0.0	0.9	6.9	5.8	0.6	84.3
1933	39.4	−1.5	4.1	.3	.0	1.5	5.5	2.0	.7	46.3
1939	71.2	5.5	3.6	2.2	.0	2.5	5.3	3.8	.5	72.1
1940	79.6	8.8	3.3	2.4	.0	2.7	5.3	4.0	.4	77.6
1941	102.8	14.3	3.3	2.8	.0	2.6	5.3	4.4	.5	95.2
1942	136.2	19.7	3.1	3.5	.0	2.7	5.2	4.3	.5	122.4
1943	169.7	24.0	2.7	4.6	.2	2.5	5.1	4.4	.5	150.7
1944	182.6	24.2	2.3	5.2	−.2	3.1	5.2	4.6	.5	164.5
1945	181.6	19.7	2.2	6.3	.0	5.6	5.8	4.6	.5	170.0
1946	180.7	17.2	1.8	7.7	.0	10.8	6.6	5.6	.5	177.6
1947	196.6	22.9	2.3	6.7	.0	11.2	7.5	6.3	.6	190.2
1948	221.5	30.3	2.4	6.0	.0	10.6	8.0	7.0	.7	209.2
1949	215.2	28.0	2.6	6.6	.0	11.7	8.7	7.2	.8	206.4
1950	239.8	34.9	3.0	7.4	.0	14.4	9.6	8.8	.8	228.1
1951	277.3	39.9	3.5	8.8	.1	11.6	10.4	8.5	.9	256.5
1952	291.6	37.5	3.9	9.3	.0	12.2	11.2	8.5	1.0	273.8
1953	306.6	37.7	4.4	9.6	−.1	13.1	12.4	8.8	1.2	290.5
1954	306.3	36.6	5.2	10.6	.0	15.3	13.7	9.1	1.1	293.0
1955	336.3	47.1	5.8	12.0	.0	16.4	14.9	10.3	1.2	314.2
1956	356.3	45.7	6.5	13.5	.0	17.5	16.6	11.1	1.4	337.2
1957	372.8	45.3	7.8	15.5	.0	20.3	18.7	11.5	1.5	356.3
1958	375.0	40.3	9.5	15.9	.0	24.7	20.3	11.3	1.6	367.1
1959	409.2	51.4	10.2	18.8	.0	25.7	22.3	12.2	1.8	390.7
1960	424.9	49.5	11.3	21.9	.0	27.5	24.9	12.9	2.0	409.4
1961	439.0	50.3	12.9	22.9	.0	31.5	26.3	13.3	2.0	426.0
1962	473.3	58.3	14.6	25.4	.0	32.6	28.9	14.4	2.1	453.2
1963	500.3	63.6	16.3	28.5	.0	34.5	32.2	15.5	2.4	476.3
1964	537.6	70.7	18.2	30.1	.0	36.0	35.5	17.3	2.7	510.2
1965	585.2	81.3	20.9	31.6	.0	39.1	39.6	19.1	2.8	552.0
1966	642.0	86.6	24.3	40.6	.0	43.6	44.2	19.4	3.0	600.8
1967	677.7	84.1	27.4	45.5	.0	52.3	48.2	20.2	3.1	644.5
1968	739.1	90.7	29.8	50.4	.0	60.6	53.2	21.9	3.4	707.2
1969	798.1	87.4	34.6	57.9	.0	67.5	60.9	22.4	3.9	772.9
1970	832.6	74.7	41.2	62.2	.0	81.8	69.3	22.2	4.1	831.8
1971	898.1	87.1	46.3	68.9	.6	97.0	74.7	22.6	4.4	894.0
1972	994.1	100.7	51.0	79.0	.0	108.4	80.8	24.1	4.9	981.6
1973	1,122.7	113.3	59.6	97.6	−.1	124.1	93.3	26.6	5.5	1,101.7
1974	1,203.5	101.7	75.5	110.5	−.5	147.4	111.9	28.9	5.8	1,210.1
1975	1,289.1	117.6	83.8	118.5	.1	185.7	122.5	28.7	7.4	1,313.4
1976	1,441.4	145.2	88.8	134.5	.1	202.8	134.1	33.8	7.9	1,451.4
1977	1,617.8	174.8	105.3	149.8	.1	217.5	155.4	38.2	8.6	1,607.5
1978	1,838.2	197.2	126.3	171.7	.3	234.8	182.5	43.0	9.3	1,812.4
1979	2,047.3	200.1	158.3	197.8	−.2	262.8	221.5	48.1	10.3	2,034.0
1980	2,203.5	177.2	200.9	216.5	.0	312.6	271.9	52.9	12.1	2,258.5
1981	2,443.5	188.0	248.1	251.2	.1	355.7	335.4	61.3	12.4	2,520.9
1982	2,518.4	150.0	272.3	269.6	.0	396.2	369.7	63.9	14.3	2,670.8
1983	2,719.5	213.7	281.0	291.0	−.4	426.6	393.1	68.7	16.0	2,838.6
1984	3,028.6	266.9	304.8	324.9	.2	437.9	444.7	75.5	18.7	3,108.7
1985	3,229.9	277.6	315.3	352.7	−.2	468.2	476.5	76.3	21.6	3,327.0
1986	3,422.0	284.4	326.1	374.3	.0	496.0	497.6	81.2	22.3	3,534.3
1987 ᵖ	3,635.9	305.3	336.7	394.4	.0	519.8	515.8	87.5	23.2	3,745.8
1982: IV	2,548.2	146.1	266.9	273.0	.0	420.2	366.2	65.4	15.2	2,729.2
1983: IV	2,851.5	248.5	290.2	299.2	.0	429.0	411.6	71.0	16.5	2,941.8
1984: IV	3,096.1	266.9	313.1	331.5	.6	443.0	464.4	76.8	20.0	3,188.3
1985: I	3,156.5	265.6	316.5	346.2	.1	461.3	472.2	76.6	21.1	3,259.2
II	3,204.4	274.2	313.2	350.6	−1.0	464.8	474.2	76.4	21.6	3,304.4
III	3,254.4	292.8	313.7	354.1	.0	471.6	475.0	75.9	21.8	3,338.2
IV	3,304.4	277.8	317.9	360.0	.0	474.9	484.6	76.3	21.9	3,406.4
1986: I	3,364.2	288.0	326.6	369.3	.0	486.6	495.7	78.8	22.0	3,463.4
II	3,414.1	282.3	328.7	371.9	.0	492.3	500.0	81.0	22.2	3,526.6
III	3,438.7	286.4	327.5	374.9	.0	501.2	498.1	82.1	22.4	3,553.6
IV	3,471.0	281.1	321.7	381.0	.0	504.1	496.8	82.9	22.6	3,593.6
1987: I	3,548.3	294.0	323.6	386.7	.0	510.9	499.8	84.5	22.8	3,662.0
II	3,593.3	296.8	331.1	390.9	.0	518.4	506.3	86.3	23.1	3,708.6
III	3,659.0	314.9	340.6	396.6	.3	522.5	520.0	88.7	23.3	3,761.0
IV ᵖ			351.5	403.6	−.3	527.5	537.2	90.5	23.6	3,851.5

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–24.—*National income by type of income, 1929–87*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	National income [1]	Compensation of employees			Proprietors' income with inventory valuation and capital consumption adjustments							
						Farm			Nonfarm			
		Total	Wages and salaries	Supplements to wages and salaries [2]	Total	Total	Proprietors' income [3]	Capital consumption adjustment	Total	Proprietors' income [4]	Inventory valuation adjustment	Capital consumption adjustment
1929	84.7	51.1	50.5	0.7	14.4	6.1	6.3	−0.2	8.3	8.8	0.1	−0.6
1933	39.4	29.6	29.0	.6	5.4	2.5	2.5	.0	2.9	3.9	−.5	−.5
1939	71.2	48.2	46.0	2.2	11.4	4.4	4.5	−.1	7.1	7.6	−.2	−.4
1940	79.6	52.2	49.9	2.3	12.6	4.4	4.5	−.1	8.2	8.6	.0	−.3
1941	102.8	64.8	62.1	2.8	17.1	6.4	6.5	−.2	10.8	11.7	−.6	−.3
1942	136.2	85.3	82.1	3.2	23.9	10.1	10.3	−.2	13.8	14.4	−.4	−.3
1943	169.7	109.6	105.8	3.8	28.8	12.0	12.2	−.2	16.8	17.1	−.2	−.2
1944	182.6	121.3	116.7	4.5	30.0	11.9	12.2	−.3	18.1	18.3	−.1	−.1
1945	181.6	123.3	117.5	5.8	31.5	12.4	12.6	−.3	19.1	19.3	−.1	−.1
1946	180.7	119.6	112.0	7.6	36.3	14.8	15.2	−.4	21.5	23.3	−1.7	−.1
1947	196.6	130.1	123.1	7.0	35.5	15.1	15.6	−.5	20.4	21.8	−1.5	.1
1948	221.5	142.1	135.5	6.5	40.4	17.5	18.2	−.7	22.9	23.1	−.4	.2
1949	215.2	142.0	134.7	7.3	35.9	12.8	13.5	−.7	23.1	22.2	.5	.5
1950	239.8	155.4	147.2	8.2	38.8	13.6	14.3	−.7	25.2	25.7	−1.1	.6
1951	277.3	181.6	171.6	10.0	44.0	16.0	16.8	−.8	28.0	27.7	−.3	.6
1952	291.6	196.3	185.6	10.7	44.4	15.0	15.9	−.9	29.4	28.5	.2	.7
1953	306.6	210.4	199.0	11.5	43.4	13.0	13.9	−.9	30.4	29.8	−.2	.7
1954	306.3	209.4	197.2	12.1	43.5	12.4	13.2	−.8	31.1	30.4	.0	.8
1955	336.3	225.9	212.1	13.8	45.4	11.3	12.1	−.8	34.0	33.5	−.2	.7
1956	356.3	244.7	229.0	15.7	46.9	11.1	12.0	−.9	35.8	35.4	−.5	.9
1957	372.8	257.8	239.9	17.8	48.8	11.0	11.9	−.9	37.8	37.2	−.3	.9
1958	375.0	259.8	241.3	18.5	51.5	13.1	14.0	−.9	38.5	37.7	−.1	.9
1959	409.2	281.2	259.8	21.4	51.7	10.8	11.7	−.9	40.9	40.1	.0	.9
1960	424.9	296.7	272.8	23.8	52.1	11.6	12.4	−.8	40.5	39.7	.0	.8
1961	439.0	305.6	280.5	25.1	54.3	12.0	12.8	−.8	42.3	41.7	.0	.6
1962	473.3	327.4	299.3	28.1	56.6	12.1	12.9	−.8	44.4	43.8	.0	.6
1963	500.3	345.5	314.8	30.7	57.7	11.9	12.6	−.7	45.7	45.1	.0	.7
1964	537.6	371.0	337.7	33.2	60.5	10.7	11.4	−.7	49.8	49.1	−.1	.7
1965	585.2	399.8	363.7	36.1	65.1	13.0	13.7	−.7	52.1	51.8	−.2	.4
1966	642.0	443.0	400.3	42.7	69.6	14.0	14.8	−.8	55.5	55.5	−.2	.3
1967	677.7	475.5	428.9	46.6	71.1	12.7	13.6	−.8	58.4	58.4	−.2	.2
1968	739.1	524.7	471.9	52.8	75.4	12.8	13.7	−.9	62.6	63.1	−.4	−.1
1969	798.1	578.4	518.3	60.1	79.3	14.6	15.8	−1.1	64.7	65.1	−.5	.1
1970	832.6	618.3	551.5	66.8	80.2	14.7	16.0	−1.3	65.4	66.0	−.5	.0
1971	898.1	659.4	584.5	74.9	86.8	15.5	16.8	−1.3	71.4	72.3	−.6	−.3
1972	994.1	726.2	638.7	87.6	98.3	19.4	21.1	−1.7	79.0	79.6	−.7	.1
1973	1,122.7	812.8	708.6	104.2	119.0	33.7	35.6	−1.9	85.3	87.2	−2.0	.1
1974	1,203.5	891.3	772.2	119.1	118.8	27.5	30.1	−2.6	91.3	95.3	−3.8	−.3
1975	1,289.1	948.7	814.7	134.0	125.4	25.4	29.0	−3.6	100.0	102.2	−1.2	−1.0
1976	1,441.4	1,057.9	899.6	158.3	137.7	20.6	24.6	−4.0	117.1	119.6	−1.3	−1.3
1977	1,617.8	1,176.6	994.0	182.6	152.9	20.5	25.1	−4.6	132.4	135.1	−1.3	−1.4
1978	1,838.2	1,329.2	1,119.6	209.7	176.2	27.0	32.4	−5.3	149.2	152.8	−2.3	−1.4
1979	2,047.3	1,491.4	1,251.9	239.5	191.9	31.7	38.0	−6.3	160.1	164.0	−2.9	−1.0
1980	2,203.5	1,638.2	1,372.0	266.3	180.7	20.5	28.1	−7.6	160.1	164.3	−2.9	−1.2
1981	2,443.5	1,807.4	1,510.4	297.1	186.8	30.7	39.4	−8.7	156.1	155.2	−1.4	2.3
1982	2,518.4	1,907.0	1,586.1	320.9	175.5	24.6	33.9	−9.3	150.9	148.5	−.5	2.9
1983	2,719.5	2,020.7	1,676.2	344.5	190.9	12.4	21.8	−9.4	178.4	167.3	−.8	12.0
1984	3,028.6	2,213.9	1,838.8	375.1	234.5	30.5	39.6	−9.2	204.0	182.4	−.4	22.0
1985	3,229.9	2,370.8	1,974.7	396.1	257.3	29.7	38.3	−8.6	227.6	196.0	−.2	31.8
1986	3,422.0	2,504.9	2,089.1	415.8	289.8	37.2	45.4	−8.1	252.6	217.7	−.2	35.1
1987 [p]	3,635.9	2,647.5	2,212.7	434.8	327.8	48.8	56.4	−7.7	279.1	239.0	−1.4	41.5
1982: IV	2,548.2	1,931.1	1,603.7	327.4	188.3	28.5	38.0	−9.4	159.8	156.9	−.6	3.5
1983: IV	2,851.5	2,092.7	1,739.4	353.4	207.8	19.3	28.5	−9.3	188.6	172.7	−.7	16.5
1984: IV	3,096.1	2,272.7	1,891.1	381.7	237.8	28.1	37.5	−9.3	209.7	182.5	.3	26.9
1985: I	3,156.5	2,314.9	1,926.5	388.4	252.1	31.7	40.7	−9.0	220.4	191.4	−.5	29.5
II	3,204.4	2,351.5	1,957.6	393.9	256.4	32.2	40.9	−8.7	224.2	194.0	−1.3	31.5
III	3,254.4	2,386.3	1,987.9	398.4	252.4	22.9	31.4	−8.5	229.5	197.3	−.5	32.8
IV	3,304.4	2,430.5	2,026.7	403.8	268.0	31.7	40.1	−8.4	236.3	201.3	1.6	33.4
1986: I	3,364.2	2,464.8	2,055.3	409.5	270.8	28.0	36.2	−8.2	242.8	209.2	−.2	33.8
II	3,414.1	2,487.6	2,074.6	413.0	298.1	48.1	56.3	−8.2	250.1	217.4	−1.6	34.2
III	3,438.7	2,515.1	2,097.9	417.2	292.5	36.3	44.3	−8.0	256.2	220.2	.7	35.3
IV	3,471.0	2,552.0	2,128.5	423.5	297.8	36.6	44.5	−7.9	261.2	223.9	.4	36.9
1987: I	3,548.3	2,589.9	2,163.3	426.6	320.9	51.3	59.0	−7.7	269.7	232.4	−1.8	39.1
II	3,593.3	2,623.4	2,191.4	432.0	323.1	47.3	55.0	−7.7	275.8	236.5	−1.5	40.9
III	3,659.0	2,663.5	2,226.5	437.0	322.7	40.6	48.3	−7.7	282.1	240.6	−.9	42.4
IV [p]		2,713.4	2,269.9	443.5	344.6	55.8	63.3	−7.5	288.7	246.6	−1.5	43.6

---

[1] National income is the total net income earned in production. It differs from gross national product mainly in that it excludes depreciation charges and other allowances for business and institutional consumption of durable capital goods and indirect business taxes. See Table B–22.

[2] Employer contributions for social insurance and to private pension, health, and welfare funds.

See next page for continuation of table.

TABLE B–24.—*National income by type of income, 1929–87*—Continued

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Rental income of persons with capital consumption adjustment			Corporate profits with inventory valuation and capital consumption adjustments									Net interest
				Total	Profits with inventory valuation adjustment and without capital consumption adjustment							Capital consumption adjustment	
	Total	Rental income of persons	Capital consumption adjustment		Total	Profits					Inventory valuation adjustment		
						Profits before tax	Profits tax liability	Profits after tax					
								Total	Dividends	Undistributed profits			
1929	4.9	5.6	−0.7	9.6	10.5	10.0	1.4	8.6	5.8	2.8	0.5	−0.9	4.7
1933	2.0	2.1	−.1	−1.5	−1.2	1.0	.5	.4	2.0	−1.6	−2.1	−.3	4.1
1939	2.6	3.2	−.5	5.5	6.5	7.2	1.4	5.7	3.8	2.0	−.7	−1.0	3.6
1940	2.7	3.3	−.6	8.8	9.8	10.0	2.8	7.2	4.0	3.2	−.2	−1.1	3.3
1941	3.2	4.0	−.8	14.3	15.4	17.9	7.6	10.3	4.4	5.8	−2.5	−1.1	3.3
1942	4.1	5.1	−.9	19.7	20.5	21.7	11.4	10.3	4.3	6.0	−1.2	−.8	3.1
1943	4.6	5.7	−1.1	24.0	24.5	25.3	14.1	11.2	4.4	6.7	−.8	−.5	2.7
1944	4.8	6.1	−1.3	24.2	24.0	24.2	12.9	11.3	4.6	6.7	−.3	.2	2.3
1945	5.0	6.5	−1.5	19.7	19.3	19.8	10.7	9.1	4.6	4.5	−.6	.4	2.2
1946	5.8	7.5	−1.7	17.2	19.6	24.8	9.1	15.7	5.6	10.2	−5.3	−2.4	1.8
1947	5.8	8.2	−2.4	22.9	25.9	31.8	11.3	20.5	6.3	14.2	−5.9	−2.9	2.3
1948	6.4	9.1	−2.7	30.3	33.4	35.6	12.4	23.2	7.0	16.2	−2.2	−3.2	2.4
1949	6.7	9.4	−2.7	28.0	31.1	29.2	10.2	19.0	7.2	11.8	1.9	−3.0	2.6
1950	7.7	10.5	−2.8	34.9	37.9	42.9	17.9	25.0	8.8	16.2	−5.0	−3.0	3.0
1951	8.3	11.5	−3.2	39.9	43.3	44.5	22.6	21.9	8.5	13.4	−1.2	−3.4	3.5
1952	9.4	12.7	−3.3	37.5	40.6	39.6	19.4	20.2	8.5	11.8	1.0	−3.2	3.9
1953	10.7	13.9	−3.3	37.7	40.2	41.2	20.3	20.9	8.8	12.1	−1.0	−2.5	4.4
1954	11.6	14.9	−3.2	36.6	38.4	38.7	17.6	21.1	9.1	11.9	−.3	−1.8	5.2
1955	12.0	15.3	−3.3	47.1	47.5	49.2	22.0	27.2	10.3	16.9	−1.7	−.4	5.8
1956	12.4	15.9	−3.5	45.7	46.9	49.6	22.0	27.6	11.1	16.6	−2.7	−1.2	6.5
1957	13.1	16.5	−3.5	45.3	46.6	48.1	21.4	26.7	11.5	15.2	−1.5	−1.3	7.8
1958	13.9	17.3	−3.4	40.3	41.6	41.9	19.0	22.9	11.3	11.6	−.3	−1.3	9.5
1959	14.6	18.0	−3.4	51.4	52.3	52.6	23.6	28.9	12.2	16.7	−.3	−.8	10.2
1960	15.3	18.7	−3.4	49.5	49.8	49.9	22.7	27.2	12.9	14.3	−.2	−.3	11.3
1961	15.8	19.1	−3.3	50.3	50.1	49.8	22.8	27.1	13.3	13.7	.3	.2	12.9
1962	16.5	19.8	−3.3	58.3	55.2	55.1	24.0	31.2	14.4	16.8	.0	3.1	14.6
1963	17.1	20.3	−3.2	63.6	59.8	59.8	26.2	33.5	15.5	18.0	.1	3.8	16.3
1964	17.3	20.5	−3.2	70.7	66.2	66.7	28.0	38.7	17.3	21.4	−.5	4.5	18.2
1965	18.1	21.3	−3.3	81.3	76.2	77.4	30.9	46.5	19.1	27.4	−1.2	5.2	20.9
1966	18.6	22.2	−3.6	86.6	81.2	83.3	33.7	49.6	19.4	30.2	−2.1	5.4	24.3
1967	19.6	23.5	−3.9	84.1	78.6	80.1	32.7	47.5	20.2	27.3	−1.6	5.5	27.4
1968	18.4	22.9	−4.5	90.7	85.4	89.1	39.4	49.7	22.0	27.7	−3.7	5.3	29.8
1969	18.4	24.2	−5.8	87.4	81.4	87.2	39.7	47.5	22.5	25.0	−5.9	6.1	34.6
1970	18.2	24.6	−6.4	74.7	69.5	76.0	34.4	41.7	22.5	19.2	−6.6	5.2	41.2
1971	18.6	25.9	−7.4	87.1	82.7	87.3	37.7	49.6	22.9	26.6	−4.6	4.3	46.3
1972	17.9	26.5	−8.6	100.7	94.9	101.5	41.9	59.6	24.4	35.2	−6.6	5.8	51.0
1973	18.0	28.1	−10.1	113.3	107.1	127.2	49.3	77.9	27.0	50.8	−20.0	6.2	59.6
1974	16.1	28.9	−12.7	101.7	99.4	138.9	51.8	87.1	29.7	57.3	−39.5	2.3	75.5
1975	13.5	28.6	−15.0	117.6	123.9	134.8	50.9	83.9	29.6	54.3	−11.0	−6.2	83.8
1976	11.9	28.9	−17.0	145.2	155.3	170.3	64.2	106.0	34.6	71.4	−14.9	−10.1	88.8
1977	8.2	28.8	−20.6	174.8	183.8	200.4	73.0	127.4	39.5	87.9	−16.6	−9.0	105.3
1978	9.3	34.2	−24.9	197.2	208.2	233.5	83.5	150.0	44.7	105.2	−25.3	−10.9	126.3
1979	5.6	35.7	−30.1	200.1	214.1	257.2	88.0	169.2	50.1	119.1	−43.2	−14.0	158.3
1980	6.6	41.4	−34.8	177.2	194.0	237.1	84.8	152.3	54.7	97.6	−43.1	−16.8	200.9
1981	13.3	52.2	−38.9	188.0	202.3	226.5	81.1	145.4	63.6	81.8	−24.2	−14.4	248.1
1982	13.6	54.4	−40.8	150.0	159.2	169.6	63.1	106.5	66.9	39.6	−10.4	−9.2	272.3
1983	13.2	55.0	−41.8	213.7	196.7	207.6	77.2	130.4	71.5	58.9	−10.9	17.0	281.0
1984	8.5	51.9	−43.3	266.9	234.2	240.0	93.9	146.1	79.0	67.0	−5.8	32.7	304.8
1985	9.0	54.0	−45.0	277.6	224.1	224.8	96.7	128.1	81.3	46.8	−.7	53.5	315.3
1986	16.7	62.2	−45.5	284.4	238.4	231.9	105.0	126.8	86.8	40.0	6.5	46.0	326.1
1987 ^{p}	18.5	67.1	−48.5	305.3	257.2	274.6	137.5	137.1	93.8	43.3	−17.4	48.1	336.7
1982: IV	15.8	56.5	−40.7	146.1	150.7	164.1	59.8	104.3	68.5	35.8	−13.4	−4.5	266.9
1983: IV	12.4	54.3	−41.9	248.5	223.4	231.5	88.1	143.4	73.9	69.5	−8.1	25.1	290.2
1984: IV	5.6	49.6	−44.0	266.9	224.6	226.1	87.0	139.2	80.8	58.4	−1.6	42.3	313.1
1985: I	7.3	51.0	−43.7	265.6	216.1	217.6	94.0	123.6	81.2	42.4	−1.5	49.5	316.5
II	9.1	52.7	−43.6	274.2	219.8	218.0	93.2	124.8	81.3	43.5	1.8	54.4	313.2
III	9.3	55.2	−46.0	292.8	236.8	230.2	100.5	129.7	81.2	48.5	6.5	56.0	313.7
IV	10.1	56.9	−46.8	277.8	223.7	233.5	99.1	134.4	81.7	52.7	−9.8	54.2	317.9
1986: I	14.0	58.7	−44.7	288.0	236.7	218.9	98.1	120.9	84.3	36.6	17.8	51.3	326.6
II	17.4	62.8	−45.4	282.3	235.6	224.4	102.1	122.3	86.6	35.7	11.3	46.7	328.7
III	17.2	62.8	−45.6	286.4	242.4	236.3	106.1	130.2	87.7	42.5	6.0	44.0	327.5
IV	18.4	64.6	−46.2	281.1	239.0	247.9	113.9	134.0	88.6	45.4	−8.9	42.1	321.7
1987: I	20.0	66.2	−46.3	294.0	245.7	257.0	128.0	129.0	90.3	38.7	−11.3	48.2	323.6
II	18.9	67.2	−48.3	296.8	248.8	268.7	134.2	134.5	92.4	42.1	−20.0	48.0	331.1
III	17.3	66.9	−49.6	314.9	267.3	284.9	143.0	141.9	95.2	46.7	−17.6	47.7	340.6
IV ^{p}	18.1	68.0	−50.0	....	....	....	....	....	97.3	....	−20.7	48.5	351.5

---

[3] With inventory valuation adjustment and without capital consumption adjustment.
[4] Without inventory valuation and capital consumption adjustments.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B-25.—*Sources of personal income, 1929–87*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Personal income	Wage and salary disbursements[1]						Other labor income[1]	Proprietors' income with inventory valuation and capital consumption adjustments	
		Total	Commodity-producing industries		Distributive industries	Service industries	Government and government enterprises		Farm	Nonfarm
			Total	Manufacturing						
1929	84.3	50.5	21.5	16.1	15.6	8.4	5.0	0.5	6.1	8.3
1933	46.3	29.0	9.8	7.8	8.8	5.2	5.2	.4	2.5	2.9
1939	72.1	46.0	17.4	13.6	13.3	7.1	8.2	.6	4.4	7.1
1940	77.6	49.9	19.7	15.6	14.2	7.5	8.5	.6	4.4	8.2
1941	95.2	62.1	27.5	21.7	16.3	8.1	10.2	.7	6.4	10.8
1942	122.4	82.1	39.1	30.9	18.0	9.0	16.0	.9	10.1	13.8
1943	150.7	105.6	49.0	40.9	20.1	9.9	26.6	1.1	12.0	16.8
1944	164.5	116.9	50.4	42.9	22.7	10.9	33.0	1.5	11.9	18.1
1945	170.0	117.5	45.9	38.2	24.8	11.9	34.9	1.8	12.4	19.1
1946	177.6	112.0	46.0	36.5	31.0	14.3	20.7	2.0	14.8	21.5
1947	190.2	123.1	54.2	42.5	35.2	16.1	17.5	2.4	15.1	20.4
1948	209.2	135.5	61.1	47.1	37.5	17.9	19.0	2.7	17.5	22.9
1949	206.4	134.8	57.8	44.6	37.7	18.5	20.8	2.9	12.8	23.1
1950	228.1	147.2	64.8	50.3	39.9	19.9	22.6	3.7	13.6	25.2
1951	256.5	171.5	76.4	59.4	44.4	21.6	29.2	4.6	16.0	28.0
1952	273.8	185.6	82.1	64.2	47.0	23.2	33.3	5.2	15.0	29.4
1953	290.5	199.0	89.8	71.3	49.9	25.0	34.4	5.9	13.0	30.4
1954	293.0	197.2	85.8	67.6	50.3	26.2	34.9	6.1	12.4	31.1
1955	314.2	212.1	93.3	73.9	53.6	28.7	36.6	7.0	11.3	34.0
1956	337.2	229.0	100.8	79.5	58.0	31.5	38.8	8.0	11.1	35.8
1957	356.3	239.9	104.4	82.5	60.7	33.8	41.0	9.0	11.0	37.8
1958	367.1	241.3	100.3	78.7	61.1	35.9	44.1	9.4	13.1	38.5
1959	390.7	259.8	109.9	86.9	65.1	38.8	46.0	10.6	10.8	40.9
1960	409.4	272.8	113.4	89.8	68.6	41.7	49.2	11.2	11.6	40.5
1961	426.0	280.5	114.0	89.9	69.6	44.4	52.4	11.8	12.0	42.3
1962	453.2	299.3	122.2	96.8	73.3	47.6	56.3	13.0	12.1	44.4
1963	476.3	314.8	127.4	100.7	76.8	50.7	60.0	14.0	11.9	45.7
1964	510.2	337.7	136.0	107.3	82.0	54.9	64.9	15.7	10.7	49.8
1965	552.0	363.7	146.6	115.7	87.9	59.4	69.9	17.8	13.0	52.1
1966	600.8	400.3	161.6	128.2	95.1	65.3	78.3	19.9	14.0	55.5
1967	644.5	428.9	169.0	134.3	101.6	72.0	86.4	21.7	12.7	58.4
1968	707.2	471.9	184.1	146.0	110.8	80.4	96.6	25.2	12.8	62.6
1969	772.9	518.3	200.4	157.7	121.7	90.6	105.5	28.5	14.6	64.7
1970	831.8	551.5	203.7	158.4	131.2	99.4	117.1	32.5	14.7	65.4
1971	894.0	583.9	209.1	160.5	140.4	107.9	126.5	36.7	15.5	71.4
1972	981.6	638.7	228.2	175.6	153.3	119.7	137.4	43.0	19.4	79.0
1973	1,101.7	708.7	255.9	196.6	170.3	133.9	148.7	49.2	33.7	85.3
1974	1,210.1	772.6	276.5	211.8	186.8	148.6	160.9	56.5	27.5	91.3
1975	1,313.4	814.6	277.1	211.6	198.1	163.4	176.0	65.9	25.4	100.0
1976	1,451.4	899.5	309.7	238.0	219.5	181.6	188.6	79.3	20.6	117.1
1977	1,607.5	993.9	346.1	266.7	242.7	202.8	202.3	94.1	20.5	132.4
1978	1,812.4	1,119.3	392.3	300.1	274.6	232.9	219.4	107.7	27.0	149.2
1979	2,034.0	1,252.1	441.4	334.8	307.8	266.8	236.1	122.7	31.7	160.1
1980	2,258.5	1,372.0	470.7	355.6	335.5	305.6	260.2	138.4	20.5	160.1
1981	2,520.9	1,510.3	512.2	386.7	366.8	346.9	284.4	150.3	30.7	156.1
1982	2,670.8	1,586.1	511.7	384.0	384.2	384.4	305.9	163.6	24.6	150.9
1983	2,838.6	1,676.6	523.1	397.4	404.2	425.1	324.3	173.6	12.4	178.4
1984	3,108.7	1,838.6	577.6	439.1	442.8	472.1	346.1	182.9	30.5	204.0
1985	3,327.0	1,974.9	609.2	460.9	473.0	520.4	372.3	192.3	29.7	227.6
1986	3,534.3	2,089.1	623.3	470.5	497.1	573.9	394.8	201.1	37.2	252.6
1987 p	3,745.8	2,212.7	641.2	484.0	522.8	627.3	421.5	210.2	48.8	279.1
1982: IV	2,729.2	1,603.6	501.8	377.4	389.3	398.5	314.0	168.0	28.5	159.8
1983: IV	2,941.8	1,739.4	545.4	415.5	420.8	443.2	330.0	177.8	19.3	188.6
1984: IV	3,188.3	1,890.5	591.6	449.5	455.1	489.6	354.3	185.4	26.1	209.7
1985: I	3,259.2	1,926.4	600.0	454.5	461.7	500.7	363.9	188.3	31.7	220.4
II	3,304.4	1,958.6	606.3	458.1	469.2	512.9	370.2	191.3	32.2	224.2
III	3,338.2	1,987.9	610.8	462.0	476.7	526.1	374.3	193.8	22.9	229.5
IV	3,406.4	2,026.7	619.7	469.0	484.5	541.9	380.6	195.8	31.7	236.3
1986: I	3,463.4	2,055.3	620.8	469.0	491.4	557.0	386.1	197.8	28.0	242.8
II	3,526.6	2,074.6	621.2	468.7	493.7	568.1	391.6	199.8	48.1	250.1
III	3,553.6	2,097.9	622.8	470.0	498.6	578.8	397.7	202.3	36.3	256.2
IV	3,593.6	2,128.5	628.4	474.5	504.7	591.6	403.8	204.4	36.6	261.2
1987: I	3,662.0	2,163.3	632.9	477.2	511.5	606.7	412.2	206.7	51.3	269.7
II	3,708.6	2,191.4	635.0	479.0	518.9	619.3	418.1	209.5	47.3	275.8
III	3,761.0	2,226.1	641.8	485.1	526.3	633.9	424.2	211.1	40.6	282.1
IV p	3,851.5	2,270.2	655.1	494.8	534.4	649.3	431.4	213.5	55.8	288.7

---

[1] The total of wage and salary disbursements and other labor income differs from compensation of employees in Table B-24 in that it excludes employer contributions for social insurance and the excess of wage accruals over wage disbursements.

See next page for continuation of table.

TABLE B–25.—*Sources of personal income, 1929–87*—Continued

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Rental income of persons with capital consumption adjustment	Personal dividend income	Personal interest income	Transfer payments							Less: Personal contributions for social insurance	Nonfarm personal income[2]
				Total	Old-age, survivors, disability, and health insurance benefits	Government unemployment insurance benefits	Veterans benefits	Government employees retirement benefits	Aid to families with dependent children (AFDC)	Other		
1929	4.9	5.8	6.9	1.5	......	......	0.6	0.1	......	0.8	0.1	......
1933	2.0	2.0	5.5	2.1	......	......	.6	.2	......	1.4	.2	......
1939	2.6	3.8	5.3	3.0	0.0	0.4	.5	.3	......	1.7	.6	......
1940	2.7	4.0	5.3	3.1	.0	.5	.5	.3	......	1.7	.7	......
1941	3.2	4.4	5.3	3.1	.1	.4	.5	.3	......	1.8	.8	......
1942	4.1	4.3	5.2	3.1	.1	.4	.5	.3	......	1.8	1.2	......
1943	4.6	4.4	5.1	3.0	.2	.1	.5	.4	......	1.8	1.8	......
1944	4.8	4.6	5.2	3.6	.2	.1	1.0	.4	......	2.0	2.2	......
1945	5.0	4.6	5.8	6.2	.3	.4	3.0	.5	......	2.0	2.3	......
1946	5.8	5.6	6.6	11.3	.4	1.1	7.0	.7	......	2.1	2.0	159.9
1947	5.8	6.3	7.5	11.7	.5	.8	7.0	.7	0.3	2.5	2.1	172.0
1948	6.4	7.0	8.0	11.3	.6	.9	5.9	.7	.4	2.9	2.2	188.3
1949	6.7	7.2	8.7	12.5	.7	1.9	5.3	.9	.5	3.3	2.2	190.6
1950	7.7	8.8	9.6	15.2	1.0	1.5	7.7	1.0	.6	3.5	2.9	211.2
1951	8.3	8.5	10.4	12.6	1.9	.9	4.6	1.1	.6	3.6	3.4	237.1
1952	9.4	8.5	11.2	13.3	2.2	1.1	4.3	1.2	.5	3.9	3.8	255.4
1953	10.7	8.8	12.4	14.3	3.0	1.0	4.1	1.4	.5	4.2	4.0	274.2
1954	11.6	9.1	13.7	16.3	3.6	2.2	4.2	1.5	.6	4.2	4.6	277.5
1955	12.0	10.3	14.9	17.7	4.9	1.5	4.4	1.7	.6	4.5	5.2	299.6
1956	12.4	11.1	16.6	18.9	5.7	1.5	4.4	1.9	.6	4.8	5.8	322.8
1957	13.1	11.5	18.7	21.8	7.3	1.9	4.5	2.2	.7	5.2	6.7	341.9
1958	13.9	11.3	20.3	26.3	8.5	4.1	4.7	2.5	.8	5.7	6.9	350.4
1959	14.6	12.2	22.3	27.4	10.2	2.8	4.6	2.8	.9	6.2	7.9	376.2
1960	15.3	12.9	24.9	29.5	11.1	3.0	4.6	3.1	1.0	6.7	9.3	393.9
1961	15.8	13.3	26.3	33.5	12.6	4.3	5.0	3.4	1.1	7.1	9.7	409.9
1962	16.5	14.4	28.9	34.7	14.3	3.1	4.7	3.7	1.3	7.6	10.3	436.7
1963	17.1	15.5	32.2	36.9	15.2	3.0	4.8	4.2	1.4	8.3	11.8	460.0
1964	17.3	17.3	35.5	38.7	16.0	2.7	4.7	4.7	1.5	9.1	12.6	494.9
1965	18.1	19.1	39.6	41.9	18.1	2.3	4.9	5.2	1.7	9.8	13.3	534.0
1966	18.6	19.4	44.2	46.6	20.8	1.9	4.9	6.1	1.9	11.2	17.8	581.5
1967	19.6	20.2	48.2	55.5	25.5	2.2	5.6	6.9	2.3	13.0	20.6	626.3
1968	18.4	21.9	53.2	64.0	30.2	2.1	5.9	7.6	2.8	15.3	22.9	688.7
1969	18.4	22.4	60.9	71.4	32.9	2.2	6.7	8.7	3.5	17.3	26.2	752.1
1970	18.2	22.2	69.3	85.9	38.5	4.0	7.7	10.2	4.8	20.7	27.9	810.4
1971	18.6	22.6	74.7	101.5	44.5	5.8	8.8	11.8	6.2	24.5	30.7	871.8
1972	17.9	24.1	80.8	113.3	49.6	5.7	9.7	13.8	6.9	27.6	34.5	955.0
1973	18.0	26.6	93.3	129.6	60.4	4.4	10.4	16.0	7.2	31.2	42.6	1,059.7
1974	16.1	28.9	111.9	153.2	70.1	6.8	11.8	19.0	7.9	37.5	47.9	1,172.6
1975	13.5	28.7	122.5	193.1	81.4	17.6	14.5	22.7	9.2	47.6	50.4	1,276.9
1976	11.9	33.8	134.1	210.7	92.9	15.8	14.4	26.1	10.1	51.5	55.5	1,417.9
1977	8.2	38.2	155.4	226.1	104.9	12.7	13.8	29.0	10.6	55.1	61.2	1,572.6
1978	9.3	43.0	182.5	244.0	116.2	9.7	13.9	32.7	10.7	60.9	69.8	1,769.3
1979	5.6	48.1	221.5	273.1	131.8	9.8	14.4	36.9	11.0	69.1	81.0	1,983.2
1980	6.6	52.9	271.9	324.7	154.2	16.1	15.0	43.0	12.4	84.0	88.6	2,215.8
1981	13.3	61.3	335.4	368.1	182.0	15.9	16.1	49.4	13.0	91.8	104.5	2,465.6
1982	13.6	63.9	369.7	410.6	204.5	25.2	16.4	54.6	13.3	96.5	112.3	2,618.7
1983	13.2	68.7	393.1	442.6	221.7	26.3	16.6	58.7	14.2	105.1	120.1	2,799.0
1984	8.5	75.5	444.7	456.6	235.7	15.8	16.4	61.4	14.8	112.6	132.7	3,052.1
1985	9.0	76.3	476.5	489.7	253.4	15.7	16.7	67.4	15.4	121.1	148.9	3,273.5
1986	16.7	81.2	497.6	518.3	269.2	16.4	16.8	71.0	16.2	128.7	159.6	3,475.2
1987 ᵖ	18.5	87.5	515.8	543.0	282.9	14.6	16.6	76.2	16.7	136.1	169.9	3,675.5
1982: IV	15.8	65.4	366.2	435.4	216.6	31.8	16.6	56.1	13.6	100.6	113.5	2,672.8
1983: IV	12.4	71.0	411.6	445.5	227.0	20.0	16.5	60.2	14.5	107.3	123.6	2,895.6
1984: IV	5.6	76.8	464.4	463.0	241.7	15.6	16.3	58.5	14.8	116.1	135.2	3,134.7
1985: I	7.3	76.6	472.2	482.3	249.0	16.7	16.8	66.2	15.0	118.6	146.1	3,202.6
II	9.1	76.4	474.2	486.4	251.0	15.8	16.8	67.0	15.3	120.6	148.0	3,248.0
III	9.3	75.9	475.0	493.4	256.5	15.1	16.7	67.8	15.6	121.9	149.6	3,291.7
IV	10.1	76.3	484.6	496.8	257.1	15.3	16.5	68.7	15.7	123.4	151.9	3,351.7
1986: I	14.0	78.8	495.7	508.6	264.5	15.6	17.0	69.7	16.0	125.9	157.6	3,413.0
II	17.4	81.0	500.0	514.5	266.4	16.3	16.9	70.6	16.2	128.0	158.8	3,456.6
III	17.2	82.1	498.1	523.6	272.4	17.1	16.7	71.5	16.4	129.6	160.1	3,495.7
IV	18.4	82.9	496.8	526.6	273.5	16.6	16.4	72.4	16.4	131.3	161.8	3,535.7
1987: I	20.0	84.5	499.8	533.7	278.0	15.6	16.6	73.9	16.5	133.1	166.7	3,589.9
II	18.9	86.3	506.3	541.5	282.3	14.9	16.7	76.0	16.7	134.7	168.4	3,639.7
III	17.3	88.7	520.0	545.8	284.4	14.5	16.6	77.3	16.8	136.3	170.7	3,698.6
IV ᵖ	18.1	90.5	537.2	551.1	286.8	13.4	16.5	77.6	16.7	140.2	173.7	3,773.7

[2] Personal income exclusive of farm proprietors' income, farm wages, farm other labor income, and farm net interest.

Note.—The industry classification of wage and salary disbursements and proprietors' income is on an establishment basis and is based on the 1972 Standard Industrial Classification (SIC) beginning 1948 and on the 1942 SIC prior to 1948.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B-26.—*Disposition of personal income, 1929–87*

[Billions of dollars, except as noted; quarterly data at seasonally adjusted annual rates]

Year or quarter	Personal income	Less: Personal tax and nontax payments	Equals: Disposable personal income	Less: Personal outlays				Equals: Personal saving	Percent of disposable personal income		
				Total	Personal consumption expenditures	Interest paid by consumers to business	Personal transfer payments to foreigners (net)		Personal outlays		Personal saving
									Total	Personal consumption expenditures	
1929	84.3	2.6	81.7	79.2	77.3	1.5	0.3	2.6	96.8	94.5	3.2
1933	46.3	1.4	44.9	46.5	45.8	.5	.2	−1.6	103.6	102.1	−3.6
1939	72.1	2.4	69.7	67.9	67.0	.7	.2	1.8	97.4	96.2	2.6
1940	77.6	2.6	75.0	72.0	71.0	.8	.2	3.0	96.0	94.7	4.0
1941	95.2	3.3	91.9	81.9	80.8	.9	.2	10.0	89.1	87.9	10.9
1942	122.4	5.9	116.4	89.5	88.6	.7	.1	27.0	76.8	76.1	23.2
1943	150.7	17.8	132.9	100.2	99.5	.5	.2	32.7	75.4	74.8	24.6
1944	164.5	18.9	145.6	109.0	108.2	.5	.4	36.5	74.9	74.4	25.1
1945	170.0	20.8	149.2	120.5	119.6	.5	.5	28.7	80.8	80.2	19.2
1946	177.6	18.7	158.9	145.3	143.9	.7	.7	13.6	91.4	90.6	8.6
1947	190.2	21.4	168.8	163.6	161.9	1.0	.7	5.2	96.9	95.9	3.1
1948	209.2	21.0	188.1	177.0	174.9	1.4	.7	11.1	94.1	93.0	5.9
1949	206.4	18.5	187.9	180.6	178.3	1.7	.5	7.4	96.1	94.9	3.9
1950	228.1	20.6	207.5	194.8	192.1	2.3	.4	12.6	93.9	92.6	6.1
1951	256.5	28.9	227.6	211.0	208.1	2.5	.4	16.6	92.7	91.4	7.3
1952	273.8	34.0	239.8	222.4	219.1	2.9	.4	17.4	92.7	91.4	7.3
1953	290.5	35.5	255.1	236.7	232.6	3.6	.5	18.4	92.8	91.2	7.2
1954	293.0	32.5	260.5	244.1	239.8	3.8	.5	16.4	93.7	92.0	6.3
1955	314.2	35.4	278.8	262.8	257.9	4.4	.4	16.0	94.2	92.5	5.8
1956	337.2	39.7	297.5	276.2	270.6	5.1	.5	21.3	92.8	90.9	7.2
1957	356.3	42.4	313.9	291.2	285.3	5.5	.5	22.7	92.8	90.9	7.2
1958	367.1	42.2	324.9	300.6	294.6	5.6	.4	24.3	92.5	90.7	7.5
1959	390.7	46.1	344.6	322.8	316.3	6.1	.4	21.8	93.7	91.8	6.3
1960	409.4	50.5	358.9	338.1	330.7	7.0	.4	20.8	94.2	92.1	5.8
1961	426.0	52.2	373.8	348.9	341.1	7.3	.5	24.9	93.4	91.3	6.6
1962	453.2	57.0	396.2	370.2	361.9	7.8	.5	25.9	93.5	91.4	6.5
1963	476.3	60.5	415.8	391.2	381.7	8.8	.6	24.6	94.1	91.8	5.9
1964	510.2	58.8	451.4	419.9	409.3	9.9	.7	31.5	93.0	90.7	7.0
1965	552.0	65.2	486.8	452.5	440.7	11.1	.7	34.3	93.0	90.5	7.0
1966	600.8	74.9	525.9	489.9	477.3	12.0	.7	36.0	93.2	90.8	6.8
1967	644.5	82.4	562.1	516.9	503.6	12.5	.9	45.1	92.0	89.6	8.0
1968	707.2	97.7	609.6	567.1	552.5	13.8	.9	42.5	93.0	90.6	7.0
1969	772.9	116.3	656.7	614.5	597.9	15.6	1.0	42.2	93.6	91.0	6.4
1970	831.8	116.2	715.6	657.9	640.0	16.7	1.2	57.7	91.9	89.4	8.1
1971	894.0	117.3	776.8	710.5	691.6	17.7	1.2	66.3	91.5	89.0	8.5
1972	981.6	142.0	839.6	778.2	757.6	19.5	1.1	61.4	92.7	90.2	7.3
1973	1,101.7	152.0	949.8	860.8	837.2	22.3	1.3	89.0	90.6	88.2	9.4
1974	1,210.1	171.8	1,038.4	941.7	916.5	24.1	1.0	96.7	90.7	88.3	9.3
1975	1,313.4	170.6	1,142.8	1,038.2	1,012.8	24.4	1.0	104.6	90.8	88.6	9.2
1976	1,451.4	198.7	1,252.6	1,156.9	1,129.3	26.6	1.0	95.8	92.4	90.2	7.6
1977	1,607.5	228.1	1,379.3	1,288.6	1,257.2	30.5	.9	90.7	93.4	91.1	6.6
1978	1,812.4	261.1	1,551.2	1,441.1	1,403.5	36.7	.9	110.2	92.9	90.5	7.1
1979	2,034.0	304.7	1,729.3	1,611.3	1,566.8	43.5	1.0	118.1	93.2	90.6	6.8
1980	2,258.5	340.5	1,918.0	1,781.1	1,732.6	47.4	1.1	136.9	92.9	90.3	7.1
1981	2,520.9	393.3	2,127.6	1,968.1	1,915.1	52.0	1.0	159.4	92.5	90.0	7.5
1982	2,670.8	409.3	2,261.4	2,107.5	2,050.7	55.5	1.3	153.9	93.2	90.7	6.8
1983	2,838.6	410.5	2,428.1	2,297.4	2,234.5	61.9	1.0	130.6	94.6	92.0	5.4
1984	3,108.7	440.2	2,668.6	2,504.5	2,430.5	72.5	1.5	164.1	93.9	91.1	6.1
1985	3,327.0	485.9	2,841.1	2,714.1	2,629.4	82.7	2.0	127.1	95.5	92.5	4.5
1986	3,534.3	512.2	3,022.1	2,891.5	2,799.8	89.9	1.7	130.6	95.7	92.6	4.3
1987 p	3,745.8	564.7	3,181.1	3,060.9	2,966.0	93.5	1.5	120.2	96.2	93.2	3.8
1982: IV	2,729.2	411.1	2,318.1	2,174.9	2,117.0	56.8	1.1	143.1	93.8	91.3	6.2
1983: IV	2,941.8	413.9	2,527.9	2,382.5	2,315.8	65.5	1.2	145.4	94.2	91.6	5.8
1984: IV	3,188.3	459.7	2,728.6	2,571.3	2,493.4	76.3	1.6	157.3	94.2	91.4	5.8
1985: I	3,259.2	497.0	2,762.2	2,631.0	2,549.9	79.0	2.1	131.2	95.3	92.3	4.8
II	3,304.4	455.9	2,848.4	3,685.6	2,602.0	81.9	1.7	162.8	94.3	91.3	5.7
III	3,338.2	491.0	2,847.2	2,751.5	2,665.4	83.8	2.2	95.7	96.6	93.6	3.4
IV	3,406.4	499.7	2,906.6	2,788.1	2,700.1	86.2	1.9	118.5	95.9	92.9	4.1
1986: I	3,463.4	497.4	2,966.0	2,827.6	2,737.9	87.9	1.7	138.4	95.3	92.3	4.7
II	3,526.6	504.2	3,022.4	2,856.4	2,765.8	89.0	1.6	166.0	94.5	91.5	5.5
III	3,553.6	515.3	3,038.2	2,929.4	2,837.1	90.7	1.6	108.9	96.4	93.4	3.6
IV	3,593.6	532.0	3,061.6	2,952.6	2,858.6	92.1	1.9	109.0	96.4	93.4	3.6
1987: I	3,662.0	536.1	3,125.9	2,987.5	2,893.8	92.1	1.7	138.4	95.6	92.6	4.4
II	3,708.6	578.0	3,130.6	3,037.4	2,943.7	92.6	1.2	93.2	97.0	94.0	3.0
III	3,761.0	565.7	3,195.3	3,106.5	3,011.3	93.9	1.2	88.8	97.2	94.2	2.8
IV p	3,851.5	578.9	3,272.6	3,112.2	3,015.1	95.3	1.7	160.4	95.1	92.1	4.9

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–27.—*Total and per capita disposable personal income and personal consumption expenditures in current and 1982 dollars, 1929–87*

[Quarterly data at seasonally adjusted annual rates, except as noted]

Year or quarter	Disposable personal income				Personal consumption expenditures				Population (thousands) [1]
	Total (billions of dollars)		Per capita (dollars)		Total (billions of dollars)		Per capita (dollars)		
	Current dollars	1982 dollars	Current dollars	1982 dollars	Current dollars	1982 dollars	Current dollars	1982 dollars	
1929	81.7	498.6	671	4,091	77.3	471.4	634	3,868	121,878
1933	44.9	370.8	357	2,950	45.8	378.7	365	3,013	125,690
1939	69.7	499.5	532	3,812	67.0	480.5	511	3,667	131,028
1940	75.0	530.7	568	4,017	71.0	502.6	538	3,804	132,122
1941	91.9	604.1	689	4,528	80.8	531.1	606	3,981	133,402
1942	116.4	693.0	863	5,138	88.6	527.6	657	3,912	134,860
1943	132.9	721.4	972	5,276	99.5	539.9	727	3,949	136,739
1944	145.6	749.3	1,052	5,414	108.2	557.1	782	4,026	138,397
1945	149.2	739.5	1,066	5,285	119.6	592.7	855	4,236	139,928
1946	158.9	723.3	1,124	5,115	143.9	655.0	1,018	4,632	141,389
1947	168.8	694.8	1,171	4,820	161.9	666.6	1,123	4,625	144,126
1948	188.1	733.1	1,283	5,000	174.9	681.8	1,193	4,650	146,631
1949	187.9	733.2	1,260	4,915	178.3	695.4	1,195	4,661	149,188
1950	207.5	791.8	1,368	5,220	192.1	733.2	1,267	4,834	151,684
1951	227.6	819.0	1,475	5,308	208.1	748.7	1,349	4,853	154,287
1952	239.8	844.3	1,528	5,379	219.1	771.4	1,396	4,915	156,954
1953	255.1	880.0	1,599	5,515	232.6	802.5	1,458	5,029	159,565
1954	260.5	894.0	1,604	5,505	239.8	822.7	1,477	5,066	162,391
1955	278.8	944.5	1,687	5,714	257.9	873.8	1,560	5,287	165,275
1956	297.5	989.4	1,769	5,881	270.6	899.8	1,608	5,349	168,221
1957	313.9	1,012.1	1,833	5,909	285.3	919.7	1,666	5,370	171,274
1958	324.9	1,028.8	1,865	5,908	294.6	932.9	1,692	5,357	174,141
1959	344.6	1,067.2	1,946	6,027	316.3	979.4	1,786	5,531	177,073
1960	358.9	1,091.1	1,986	6,036	330.7	1,005.1	1,829	5,561	180,760
1961	373.8	1,123.2	2,034	6,113	341.1	1,025.2	1,857	5,579	183,742
1962	396.2	1,170.2	2,123	6,271	361.9	1,069.0	1,940	5,729	186,590
1963	415.8	1,207.3	2,197	6,378	381.7	1,108.4	2,017	5,855	189,300
1964	451.4	1,291.0	2,352	6,727	409.3	1,170.6	2,133	6,099	191,927
1965	486.8	1,365.7	2,505	7,027	440.7	1,236.4	2,268	6,362	194,347
1966	525.9	1,431.3	2,675	7,280	477.3	1,298.9	2,428	6,607	196,599
1967	562.1	1,493.2	2,828	7,513	503.6	1,337.7	2,534	6,730	198,752
1968	609.6	1,551.3	3,037	7,728	552.5	1,405.9	2,752	7,003	200,745
1969	656.7	1,599.8	3,239	7,891	597.9	1,456.7	2,949	7,185	202,736
1970	715.6	1,668.1	3,489	8,134	640.0	1,492.0	3,121	7,275	205,089
1971	776.8	1,728.4	3,740	8,322	691.6	1,538.8	3,330	7,409	207,692
1972	839.6	1,797.4	4,000	8,562	757.6	1,621.9	3,609	7,726	209,924
1973	949.8	1,916.3	4,481	9,042	837.2	1,689.6	3,950	7,972	211,939
1974	1,038.4	1,896.6	4,855	8,867	916.5	1,674.0	4,285	7,826	213,898
1975	1,142.8	1,931.7	5,291	8,944	1,012.8	1,711.9	4,689	7,926	215,981
1976	1,252.6	2,001.0	5,744	9,175	1,129.3	1,803.9	5,178	8,272	218,086
1977	1,379.3	2,066.6	6,262	9,381	1,257.2	1,883.8	5,707	8,551	220,289
1978	1,551.2	2,167.4	6,968	9,735	1,403.5	1,961.0	6,304	8,808	222,629
1979	1,729.3	2,212.6	7,682	9,829	1,566.8	2,004.4	6,960	8,904	225,106
1980	1,918.0	2,214.3	8,421	9,722	1,732.6	2,000.4	7,607	8,783	227,754
1981	2,127.6	2,248.6	9,243	9,769	1,915.1	2,024.2	8,320	8,794	230,182
1982	2,261.4	2,261.5	9,724	9,725	2,050.7	2,050.7	8,818	8,818	232,549
1983	2,428.1	2,331.9	10,340	9,930	2,234.5	2,146.0	9,516	9,139	234,829
1984	2,668.6	2,469.8	11,257	10,419	2,430.5	2,249.3	10,253	9,489	237,051
1985	2,841.1	2,542.2	11,872	10,622	2,629.4	2,352.6	10,987	9,830	239,323
1986	3,022.1	2,645.1	12,508	10,947	2,799.8	2,450.5	11,588	10,142	241,620
1987 [p]	3,181.1	2,676.1	13,048	10,976	2,966.0	2,495.2	12,165	10,234	243,809
1982: IV	2,318.1	2,276.1	9,929	9,749	2,117.0	2,078.7	9,068	8,904	233,466
1983: IV	2,527.9	2,392.7	10,725	10,151	2,315.8	2,191.9	9,825	9,299	235,707
1984: IV	2,728.6	2,496.3	11,467	10,491	2,493.4	2,281.1	10,479	9,587	237,946
1985: I	2,762.2	2,506.8	11,584	10,513	2,549.9	2,314.1	10,694	9,705	238,452
II	2,848.4	2,558.4	11,919	10,705	2,602.0	2,337.0	10,888	9,779	238,977
III	2,847.2	2,538.2	11,882	10,592	2,665.4	2,376.1	11,124	9,916	239,618
IV	2,906.6	2,565.5	12,099	10,679	2,700.1	2,383.2	11,239	9,920	240,246
1986: I	2,966.0	2,610.5	12,318	10,842	2,737.9	2,409.7	11,371	10,008	240,782
II	3,022.4	2,660.2	12,525	11,024	2,765.8	2,434.3	11,461	10,088	241,313
III	3,038.2	2,653.2	12,560	10,968	2,837.1	2,477.5	11,729	10,242	241,896
IV	3,061.6	2,656.7	12,626	10,956	2,858.6	2,480.5	11,789	10,229	242,489
1987: I	3,125.9	2,674.6	12,865	11,008	2,893.8	2,475.9	11,910	10,190	242,971
II	3,130.6	2,645.5	12,858	10,865	2,943.7	2,487.5	12,090	10,217	243,480
III	3,195.3	2,674.7	13,090	10,958	3,011.3	2,520.7	12,337	10,327	244,094
IV [p]	3,272.6	2,709.7	13,374	11,074	3,015.1	2,496.6	12,322	10,203	244,690

[1] Population of the United States including Armed Forces overseas; includes Alaska and Hawaii beginning 1960. Annual data are for July 1 through 1958 and are averages of quarterly data beginning 1959. Quarterly data are averages for the period.

Source: Department of Commerce (Bureau of Economic Analysis and Bureau of the Census).

TABLE B–28.—*Gross saving and investment, 1929–87*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Gross saving								Gross investment			Statistical discrepancy
	Total	Gross private saving			Government surplus or deficit (−), national income and product accounts			Capital grants received by the United States (net)[2]	Total	Gross private domestic investment	Net foreign investment[3]	
		Total	Personal saving	Gross business saving[1]	Total	Federal	State and local					
1929	15.9	14.9	2.6	12.3	1.0	1.2	−0.2	....	17.4	16.7	0.8	1.5
1933	.6	1.9	−1.6	3.6	−1.4	−1.3	−.1	....	1.7	1.6	.2	1.2
1939	8.9	11.1	1.8	9.3	−2.2	−2.2	.0	....	10.6	9.5	1.0	1.7
1940	13.6	14.3	3.0	11.3	−.7	−1.3	.6	....	15.0	13.4	1.5	1.4
1941	18.8	22.6	10.0	12.6	−3.8	−5.1	1.3	....	19.5	18.3	1.3	.7
1942	10.9	42.3	27.0	15.3	−31.4	−33.1	1.8	....	10.2	10.3	−.1	−.7
1943	5.8	50.0	32.7	17.3	−44.2	−46.6	2.4	....	4.1	6.2	−2.1	−1.7
1944	3.0	54.9	36.5	18.4	−51.8	−54.5	2.7	....	5.8	7.7	−2.0	2.7
1945	5.9	45.4	28.7	16.8	−39.5	−42.1	2.6	....	10.0	11.3	−1.3	4.0
1946	35.7	30.3	13.6	16.7	5.4	3.5	1.9	....	36.4	31.5	4.9	.7
1947	42.5	28.1	5.2	23.0	14.4	13.4	1.0	....	44.3	35.0	9.3	1.8
1948	50.8	42.4	11.1	31.3	8.4	8.3	.1	....	49.6	47.1	2.4	−1.3
1949	36.5	39.9	7.4	32.5	−3.4	−2.6	−.7	....	37.3	36.5	.9	.8
1950	52.5	44.5	12.6	31.8	8.0	9.2	−1.2	....	53.2	55.1	−1.8	.8
1951	58.7	52.6	16.6	36.0	6.1	6.5	−.4	....	61.4	60.5	.9	2.7
1952	52.3	56.1	17.4	38.7	−3.8	−3.7	.0	....	54.2	53.5	.6	1.8
1953	51.0	58.0	18.4	39.6	−7.0	−7.1	.1	....	53.6	54.9	−1.3	2.6
1954	51.6	58.8	16.4	42.3	−7.1	−6.0	−1.1	....	54.3	54.1	.2	2.7
1955	68.4	65.2	16.0	49.2	3.1	4.4	−1.3	....	70.2	69.7	.4	1.8
1956	77.3	72.1	21.3	50.8	5.2	6.1	−.9	....	75.4	72.7	2.8	−1.9
1957	77.1	76.1	22.7	53.5	.9	2.3	−1.4	....	75.9	71.1	4.8	−1.2
1958	64.5	77.1	24.3	52.9	−12.6	−10.3	−2.4	....	64.5	63.6	.9	−.1
1959	80.5	82.1	21.8	60.3	−1.6	−1.1	−.4	....	79.0	80.2	−1.2	−1.5
1960	84.2	81.1	20.8	60.3	3.1	3.0	.1	....	81.4	78.2	3.2	−2.8
1961	82.6	86.8	24.9	62.0	−4.3	−3.9	−.4	....	81.3	77.1	4.2	−1.2
1962	91.4	95.2	25.9	69.3	−3.8	−4.2	.5	....	91.5	87.6	3.8	.0
1963	98.7	97.9	24.6	73.3	.7	.3	.5	....	98.1	93.1	4.9	−.6
1964	108.5	110.8	31.5	79.3	−2.3	−3.3	1.0	....	107.1	99.6	7.5	−1.4
1965	123.5	123.0	34.3	88.7	.5	.5	.0	....	122.3	116.2	6.2	−1.2
1966	130.3	131.6	36.0	95.6	−1.3	−1.8	.5	....	132.4	128.6	3.8	2.1
1967	129.5	143.8	45.1	98.6	−14.2	−13.2	−1.1	....	129.2	125.7	3.5	−.4
1968	139.7	145.7	42.5	103.3	−6.0	−6.0	.1	....	138.6	137.0	1.6	−1.1
1969	158.8	148.9	42.2	106.7	9.9	8.4	1.5	....	154.9	153.2	1.7	−3.9
1970	154.7	164.5	57.7	106.7	−10.6	−12.4	1.8	0.9	153.6	148.8	4.8	−1.1
1971	171.9	190.6	66.3	124.3	−19.5	−22.0	2.6	.7	173.7	172.5	1.3	1.8
1972	200.7	203.4	61.4	142.0	−3.4	−16.8	13.5	.7	199.1	202.0	−2.9	−1.6
1973	251.9	244.0	89.0	155.0	7.9	−5.6	13.5	0	247.6	238.8	8.8	−4.3
1974	247.9	254.3	96.7	157.6	−4.3	−11.6	7.2	[4] −2.0	246.2	240.8	5.4	−1.7
1975	238.7	303.6	104.6	198.9	−64.9	−69.4	4.5	0	241.2	219.6	21.6	2.5
1976	283.0	321.4	95.8	225.6	−38.4	−53.5	15.2	0	286.6	277.7	9.0	3.6
1977	335.4	354.5	90.7	263.8	−19.1	−46.0	26.9	0	335.3	344.1	−8.7	.0
1978	408.6	409.0	110.2	298.9	−.4	−29.3	28.9	0	406.7	416.8	−10.1	−1.9
1979	458.4	445.8	118.1	327.7	11.5	−16.1	27.6	1.1	457.4	454.8	2.6	−1.0
1980	445.0	478.4	136.9	341.5	−34.5	−61.3	26.8	1.2	450.0	437.0	13.0	4.9
1981	522.0	550.5	159.4	391.1	−29.7	−63.8	34.1	1.1	526.1	515.5	10.6	4.1
1982	446.4	557.1	153.9	403.2	−110.8	−145.9	35.1	0	446.3	447.3	−1.0	−.1
1983	463.6	592.2	130.6	461.6	−128.6	−176.0	47.5	0	468.8	502.3	−33.5	5.2
1984	568.5	673.5	164.1	509.5	−105.0	−169.6	64.6	0	573.9	664.8	−90.9	5.4
1985	531.3	664.2	127.1	537.2	−132.9	−196.0	63.1	0	525.7	641.6	−115.9	−5.6
1986	532.0	679.8	130.6	549.3	−147.8	−204.7	56.8	0	527.1	671.0	−143.9	−4.9
1987 ᵖ	566.4	673.6	120.2	553.4	−107.2	−152.6	45.4	0	559.6	716.4	−156.8	−6.8
1982: IV	387.4	554.2	143.1	411.1	−166.8	−202.6	35.8	0	394.2	409.6	−15.4	6.8
1983: IV	519.9	632.8	145.4	487.3	−112.9	−169.2	56.4	0	522.4	579.8	−57.4	2.5
1984: IV	557.8	679.9	157.3	522.6	−122.1	−187.5	65.4	0	555.7	661.8	−106.1	−2.1
1985: I	552.0	649.9	131.2	518.7	−97.8	−162.9	65.1	0	552.7	638.6	−85.9	.7
II	547.7	695.8	162.8	533.1	−148.1	−210.3	62.2	0	535.9	648.4	−112.5	−11.9
III	514.7	648.4	95.7	552.7	−133.7	−195.8	62.1	0	505.6	628.6	−122.9	−9.1
IV	510.7	662.8	118.5	544.3	−152.1	−215.0	62.9	0	508.5	650.8	−142.3	−2.3
1986: I	557.8	691.8	138.4	553.4	−134.0	−196.1	62.1	0	555.0	683.4	−128.5	−2.9
II	538.7	713.7	166.0	547.7	−175.0	−230.2	55.1	0	539.6	679.4	−139.8	.9
III	516.2	660.4	108.9	551.5	−144.1	−203.7	59.6	0	510.1	660.8	−150.7	−6.1
IV	515.3	653.4	109.0	544.4	−138.1	−188.7	50.6	0	503.7	660.2	−156.5	−11.6
1987: I	554.3	683.8	138.4	545.3	−129.5	−170.5	41.0	0	552.1	699.9	−147.7	−2.2
II	551.3	639.9	93.2	546.7	−88.6	−139.2	50.6	0	546.1	702.6	−154.5	−3.1
III	559.3	648.7	88.8	559.8	−89.3	−135.8	46.5	0	548.4	707.4	−159.0	−10.9
IV ᵖ	....	....	160.4	....	....	....	....	0	589.6	755.5	−165.9	....

---

[1] Undistributed corporate profits with inventory valuation and capital consumption adjustments, corporate and noncorporate capital consumption allowances with capital consumption adjustment, and private wage accruals less disbursements.

[2] Allocations of special drawing rights (SDRs), except as noted in footnote 4.

[3] Net exports of goods and services less net transfers to foreigners and interest paid by government to foreigners plus capital grants received by the United States, net.

[4] In February 1974, the U.S. Government paid to India $2,010 million in rupees under provisions of the Agricultural Trade Development and Assistance Act. This transaction is being treated as capital grants paid to foreigners, i.e., a −$2.0 billion entry in capital grants received by the United States, net.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B-29.—*Saving by individuals, 1946–87*[1]

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Total	Increase in financial assets									Net investment in [7]			Less: Net increase in debt		
						Securities										
		Total	Checkable deposits and currency	Time and savings deposits	Money market fund shares	Government securities [2]	Corporate equities [3]	Other securities [4]	Insurance and pension reserves [5]	Other financial assets [6]	Owner-occupied homes	Consumer durables	Noncorporate business assets [8]	Mortgage debt on nonfarm homes	Consumer credit	Other debt [8] [9]
1946	25.0	18.8	5.6	6.3		−1.7	1.2	−0.9	5.3	3.1	3.8	6.7	2.0	3.6	3.1	−0.4
1947	19.3	12.1	.1	3.4		.3	1.1	−.8	5.4	2.7	7.0	9.4	1.3	4.7	3.7	2.2
1948	25.8	9.7	−2.9	2.2		1.7	1.0	.0	5.3	2.5	9.5	10.2	6.9	4.6	3.2	2.8
1949	22.0	10.2	−2.0	2.6		1.9	.7	−.4	5.6	1.7	8.7	10.9	2.0	4.4	3.2	2.2
1950	31.7	14.0	2.6	2.4		−.3	.7	−.7	6.9	2.4	12.1	14.9	7.2	6.7	4.8	5.0
1951	35.3	19.4	4.6	4.7		−.6	1.8	.3	6.3	2.2	12.1	11.4	4.4	6.6	1.6	3.7
1952	31.5	23.4	1.6	7.8		2.5	1.4	.0	7.7	2.3	11.7	8.7	1.9	6.2	5.3	2.6
1953	33.2	23.1	1.0	8.1		2.4	1.1	.5	7.9	2.2	12.7	10.3	.8	7.6	4.2	1.9
1954	28.0	21.9	2.2	9.1		.8	.5	−.8	7.8	2.3	13.1	7.0	1.7	8.7	1.5	5.5
1955	35.5	28.3	1.2	8.6		5.7	1.0	1.0	8.5	2.3	17.3	12.7	2.9	12.2	7.1	6.3
1956	38.4	30.8	1.8	9.4		4.5	2.0	1.0	9.5	2.6	16.2	8.8	1.0	11.2	3.9	3.2
1957	37.0	28.8	−.4	11.9		2.7	1.5	.8	9.5	2.8	13.8	7.9	2.1	8.9	2.9	3.8
1958	34.9	31.5	3.8	13.9		−2.5	1.5	1.0	10.4	3.4	12.8	3.7	2.9	9.5	.5	6.0
1959	37.8	36.8	1.0	11.0		8.8	.5	−.2	11.9	3.8	17.0	7.7	4.3	12.8	8.0	7.2
1960	37.7	32.5	1.0	12.0		2.4	.0	2.3	11.5	3.2	15.7	7.3	3.2	11.7	4.4	5.0
1961	37.3	35.7	−.9	18.3		1.5	.7	−.2	12.1	4.2	13.5	4.5	4.9	12.2	2.5	6.6
1962	43.0	40.7	−1.2	26.1		1.3	−1.5	−.5	13.0	3.4	14.0	8.6	7.0	13.8	6.3	7.3
1963	48.2	47.6	4.2	26.2		.6	−1.6	1.3	13.9	3.1	15.5	11.9	9.2	16.6	8.9	10.5
1964	58.0	56.5	5.3	26.1		4.9	.1	.4	16.4	3.3	15.7	15.1	8.8	17.5	9.8	10.9
1965	65.2	59.0	7.6	27.8		3.9	−1.7	.7	17.0	3.8	15.3	20.2	12.4	17.0	10.6	14.2
1966	72.8	57.8	2.4	19.0		10.7	.0	2.3	19.3	4.0	14.5	23.2	9.9	13.8	6.5	12.2
1967	79.5	70.7	9.9	35.3		−1.5	−3.6	5.2	18.8	6.7	12.6	21.3	10.7	12.4	5.7	17.8
1968	83.0	76.8	11.1	31.1		5.0	−6.0	7.9	19.9	7.8	17.0	26.9	10.0	17.0	11.5	19.2
1969	74.6	66.7	−2.5	9.1		25.8	−1.7	10.0	21.8	4.1	17.2	26.2	13.3	18.6	10.9	19.4
1970	89.5	83.3	8.9	43.6		−5.9	−.6	6.9	24.2	6.3	14.6	19.9	13.1	13.4	5.5	22.6
1971	98.9	101.3	12.3	67.7		−12.5	−4.1	6.6	28.0	3.4	22.3	25.7	19.5	25.3	14.8	29.9
1972	125.5	136.6	13.6	73.9		1.0	−8.0	.1	48.5	7.5	29.2	34.8	26.6	38.3	19.8	43.5
1973	142.5	148.0	13.3	63.4		19.2	−3.5	9.5	39.9	6.2	33.1	41.2	31.9	44.6	24.0	43.2
1974	140.6	149.2	6.5	56.1	2.4	20.1	−.6	13.3	43.7	7.7	27.9	29.9	14.9	34.8	9.9	36.6
1975	169.0	182.3	6.1	77.7	1.3	20.9	−3.9	−2.8	71.9	11.1	27.5	28.4	7.5	38.2	9.1	29.3
1976	169.4	206.9	15.7	107.2	−.0	4.6	−1.9	7.3	56.6	17.3	41.9	42.9	2.7	59.4	24.2	41.3
1977	183.1	239.4	19.7	106.7	−.2	9.9	−7.1	14.5	78.6	17.4	61.0	53.3	15.2	89.7	38.1	57.9
1978	210.3	279.8	22.3	99.2	6.0	31.5	−12.5	10.3	95.0	28.0	77.8	58.8	18.9	108.6	46.7	69.7
1979	212.0	299.3	25.7	72.2	30.6	52.8	−23.7	6.9	101.8	32.9	86.7	54.0	12.4	117.6	42.7	80.1
1980	231.2	314.5	10.3	123.8	24.5	30.5	−10.9	−15.7	118.5	33.4	66.6	31.9	−6.2	96.4	2.9	76.3
1981	266.3	328.0	25.2	64.4	90.7	52.3	−39.5	−12.3	117.9	29.3	59.7	37.4	19.5	75.0	21.8	81.4
1982	318.8	391.9	17.7	118.0	32.8	76.4	−5.2	−13.6	139.0	26.7	35.6	37.2	−4.0	49.5	19.3	73.2
1983	311.7	468.5	36.8	196.9	−31.1	98.5	4.1	−10.2	153.6	19.9	67.8	62.7	−7.3	110.8	56.6	112.6
1984	421.0	544.1	16.7	221.6	44.0	124.3	−56.0	5.1	152.4	35.9	94.6	98.8	15.0	129.0	90.4	112.0
1985	366.2	549.5	39.2	129.9	12.1	107.2	−32.4	51.7	194.1	47.8	95.4	114.1	.9	151.0	94.6	148.1
1986	392.6	532.8	99.3	105.8	42.6	−10.3	21.7	24.3	201.3	48.0	114.9	127.4	8.3	195.6	65.8	129.5
1985: I	359.0	470.0	16.5	150.3	−5.9	131.0	−81.2	65.5	159.5	34.2	99.8	110.5	6.2	141.8	101.0	84.6
II	347.5	512.0	24.4	138.3	32.6	163.5	−36.5	−28.0	203.3	14.4	92.2	110.5	10.2	135.3	89.6	152.7
III	377.3	552.7	138.9	141.5	−13.5	−59.8	−.2	43.7	230.6	71.6	91.6	127.0	−2.5	163.7	106.0	121.8
IV	381.0	663.3	−23.1	89.4	35.2	194.2	−11.9	125.6	182.9	71.0	97.7	108.4	−10.1	163.1	81.8	233.4
1986: I	421.6	503.2	63.4	125.6	42.0	1.7	21.4	21.4	169.9	57.7	110.0	108.8	1.3	138.8	62.3	100.6
II	363.8	456.6	86.1	90.0	51.0	−74.7	35.1	68.1	175.9	25.0	110.6	114.8	24.1	179.8	79.8	82.8
III	344.1	510.7	85.7	130.2	62.8	−75.0	25.5	−28.2	279.6	30.0	113.2	150.3	15.9	241.3	85.2	119.5
IV	440.8	660.7	162.0	77.4	14.5	106.8	4.9	36.1	179.7	79.3	126.0	135.7	−8.3	222.4	36.0	214.8
1987: I	421.6	403.7	−56.0	−9.8	−9.3	72.3	37.3	45.5	303.6	20.1	134.1	105.8	−7.2	176.8	6.1	31.9
II	243.5	408.2	69.7	66.4	1.2	97.2	−93.5	49.5	217.9	−.3	127.9	113.1	6.3	235.4	32.8	143.8
III	390.9	490.6	105.0	102.5	22.4	14.3	−92.0	70.6	243.5	24.3	140.1	132.4	−6.8	186.6	40.4	138.3

---

[1] Saving by households, personal trust funds, nonprofit institutions, farms, and other noncorporate business.

[2] Consists of U.S. savings bonds, other U.S. Treasury securities, U.S. Government agency securities and sponsored agency securities, mortgage pool securities, and State and local obligations.

[3] Includes mutual fund shares.

[4] Corporate and foreign bonds and open-market paper.

[5] Private life insurance reserves, private insured and noninsured pension reserves, and government insurance and pension reserves.

[6] Consists of security credit, mortgages, accident and health insurance reserves, and nonlife insurance claims for households and of consumer credit, equity in sponsored agencies, and nonlife insurance claims for noncorporate business.

[7] Purchases of physical assets less depreciation.

[8] Includes data for corporate farms.

[9] Other debt consists of security credit, policy loans, and noncorporate business debt.

Source: Board of Governors of the Federal Reserve System.

TABLE B–30.—*Number and median income (in 1986 dollars) of families and persons, and poverty status, by race, selected years, 1963–86*

Year	Families [1]						Persons below poverty level		Median income of persons 15 years old and over with income [2]			
	Number (millions)	Median income	Below poverty level				Number (millions)	Rate	Males		Females	
			Total		Female householder				All persons	Year-round full-time workers	All persons	Year-round full-time workers
			Number (millions)	Rate	Number (millions)	Rate						
ALL RACES												
1963	47.5	$22,379	7.6	15.9	2.0	40.4	36.4	19.5	$16,154	$21,740	$4,914	$12,735
1964	48.0	23,221	7.2	15.0	1.8	36.4	36.1	19.0	16,426	22,213	5,122	13,116
1965	48.5	24,177	6.7	13.9	1.9	38.4	33.2	17.3	17,456	22,929	5,285	13,263
1966 [3]	49.2	25,448	5.8	11.8	1.7	33.1	28.5	14.7	17,927	23,499	5,535	13,601
1967	50.1	26,052	5.7	11.4	1.8	33.3	27.8	14.2	18,236	23,937	5,915	13,786
1968	50.8	27,205	5.0	10.0	1.8	32.3	25.4	12.8	18,847	24,627	6,363	14,397
1969	51.6	28,213	5.0	9.7	1.8	32.7	24.1	12.1	19,228	25,925	6,377	15,185
1970	52.2	27,862	5.3	10.1	2.0	32.5	25.4	12.6	18,834	25,933	6,317	15,361
1971	53.3	27,845	5.3	10.0	2.1	33.9	25.6	12.5	18,689	26,074	6,519	15,435
1972	54.4	29,134	5.1	9.3	2.2	32.7	24.5	11.9	19,526	27,619	6,812	15,864
1973	55.1	29,734	4.8	8.8	2.2	32.2	23.0	11.1	19,877	28,295	6,899	16,008
1974 [3]	55.7	28,687	4.9	8.8	2.3	32.1	23.4	11.2	18,792	27,041	6,853	15,951
1975	56.2	27,949	5.5	9.7	2.4	32.5	25.9	12.3	18,036	26,349	6,896	15,725
1976	56.7	28,811	5.3	9.4	2.5	33.0	25.0	11.8	18,155	26,694	6,888	16,010
1977	57.2	28,966	5.3	9.3	2.6	31.7	24.7	11.6	18,316	27,267	7,131	15,948
1978	57.8	29,647	5.3	9.1	2.7	31.4	24.5	11.4	18,378	26,995	6,837	16,203
1979 [4]	59.6	29,588	5.5	9.2	2.6	30.4	26.1	11.7	17,793	26,403	6,574	15,908
1980	60.3	27,974	6.2	10.3	3.0	32.7	29.3	13.0	16,673	25,512	6,547	15,423
1981	61.0	26,991	6.9	11.2	3.3	34.6	31.8	14.0	16,243	24,946	6,580	15,018
1982	61.4	26,619	7.5	12.2	3.4	36.3	34.4	15.0	15,846	24,599	6,687	15,520
1983	62.0	27,155	7.6	12.3	3.6	36.0	35.3	15.2	16,135	24,769	7,049	15,945
1984	62.7	27,903	7.3	11.6	3.5	34.5	33.7	14.4	16,468	25,339	7,250	16,280
1985	63.6	28,269	7.2	11.4	3.5	34.0	33.1	14.0	16,625	25,480	7,356	16,565
1986	64.5	29,458	7.0	10.9	3.6	34.6	32.4	13.6	17,114	25,894	7,610	16,843
WHITE												
1970	46.5	28,904	3.7	8.0	1.1	25.0	17.5	9.9	19,797	26,676	6,399	15,632
1971	47.6	28,893	3.8	7.9	1.2	26.5	17.8	9.9	19,593	26,808	6,628	15,613
1972	48.5	30,269	3.4	7.1	1.1	24.3	16.2	9.0	20,480	28,615	6,856	16,176
1973	48.9	31,076	3.2	6.6	1.2	24.5	15.1	8.4	20,856	29,114	6,965	16,279
1974 [3]	49.4	29,812	3.4	6.8	1.3	24.8	15.7	8.6	19,686	27,568	6,930	16,087
1975	49.9	29,067	3.8	7.7	1.4	25.9	17.8	9.7	18,946	26,959	6,967	15,762
1976	50.1	29,926	3.6	7.1	1.4	25.2	16.7	9.1	19,140	27,489	6,946	16,133
1977	50.5	30,289	3.5	7.0	1.4	24.0	16.4	8.9	19,185	27,824	7,239	16,049
1978	50.9	30,870	3.5	6.9	1.4	23.5	16.3	8.7	19,249	27,496	6,919	16,356
1979 [4]	52.2	30,875	3.6	6.9	1.4	22.3	17.2	9.0	18,588	27,166	6,636	16,047
1980	52.7	29,146	4.2	8.0	1.6	25.7	19.7	10.2	17,735	26,240	6,583	15,572
1981	53.3	28,352	4.7	8.8	1.8	27.4	21.6	11.1	17,235	25,532	6,654	15,269
1982	53.4	27,948	5.1	9.6	1.8	27.9	23.5	12.0	16,753	25,254	6,778	15,729
1983 [3]	53.9	28,435	5.2	9.7	1.9	28.3	24.0	12.1	16,975	25,430	7,172	16,158
1984	54.4	29,226	4.9	9.1	1.9	27.1	23.0	11.5	17,383	26,207	7,335	16,441
1985	55.0	29,713	5.0	9.1	2.0	27.4	22.9	11.4	17,440	26,187	7,499	16,799
1986	55.7	30,809	4.8	8.6	2.0	28.2	22.2	11.0	18,060	26,617	7,760	17,101
BLACK												
1970	4.9	17,730	1.5	29.5	.8	54.3	7.5	33.5	11,693	18,171	5,825	12,808
1971	5.2	17,435	1.5	28.8	.9	53.5	7.4	32.5	11,571	18,331	5,807	13,786
1972	5.3	17,990	1.5	29.0	1.0	53.3	7.7	33.3	12,334	19,324	6,406	13,838
1973	5.4	17,935	1.5	28.1	1.0	52.7	7.4	31.4	12,615	19,623	6,287	13,805
1974 [3]	5.5	17,801	1.5	26.9	1.0	52.2	7.2	30.3	12,198	19,355	6,257	14,165
1975	5.6	17,885	1.5	27.1	1.0	50.1	7.5	31.3	11,327	20,063	6,330	15,059
1976	5.8	17,801	1.6	27.9	1.1	52.2	7.6	31.1	11,524	19,689	6,545	15,083
1977	5.8	17,303	1.6	28.2	1.2	51.0	7.7	31.3	11,385	19,183	6,251	15,000
1978	5.9	18,284	1.6	27.5	1.2	50.6	7.6	30.6	11,531	21,059	6,230	15,160
1979 [4]	6.2	17,483	1.7	27.8	1.2	49.4	8.1	31.0	11,506	19,579	6,039	14,704
1980	6.3	16,864	1.8	28.9	1.3	49.4	8.6	32.5	10,657	18,463	6,094	14,524
1981	6.4	15,993	2.0	30.8	1.4	52.9	9.2	34.2	10,249	18,064	5,911	13,789
1982	6.5	15,447	2.2	33.0	1.5	56.2	9.7	35.6	10,039	17,936	5,978	14,058
1983 [3]	6.7	16,025	2.2	32.3	1.5	53.7	9.9	35.7	9,927	18,131	6,129	14,343
1984	6.8	16,289	2.1	30.9	1.5	51.7	9.5	33.8	9,973	17,885	6,507	14,817
1985	6.9	17,109	2.0	28.7	1.5	50.5	8.9	31.3	10,975	18,317	6,398	14,871
1986	7.1	17,604	2.0	28.0	1.5	50.1	9.0	31.1	10,822	18,766	6,566	14,964

---

[1] The term "family" refers to a group of two or more persons related by blood, marriage, or adoption and residing together; all such persons are considered members of the same family. Beginning 1979, based on householder concept and restricted to primary families.

[2] Prior to 1979, data are for persons 14 years and over.

[3] Based on revised methodology; comparable with succeeding years.

[4] Based on 1980 census population controls; comparable with succeeding years.

Note.—The poverty level is based on the poverty index adopted by a Federal interagency committee in 1969. That index reflected different consumption requirements for families based on size and composition, sex and age of family householder, and farm-nonfarm residence. Minor revisions implemented in 1981 eliminated variations in the poverty thresholds based on two of these variables, farm-nonfarm residence and sex of householder. The poverty thresholds are updated every year to reflect changes in the consumer price index. For further details see "Current Population Reports," Series P-60, No. 158.

Source: Department of Commerce, Bureau of the Census.

TABLE B–31.—*Population by age groups, 1929–87*

[Thousands of persons]

July 1	Total	Age (years)						
		Under 5	5–15	16–19	20–24	25–44	45–64	65 and over
1929	121,767	11,734	26,800	9,127	10,694	35,862	21,076	6,474
1933	125,579	10,612	26,897	9,302	11,152	37,319	22,933	7,363
1939	130,880	10,418	25,179	9,822	11,519	39,354	25,823	8,764
1940	132,122	10,579	24,811	9,895	11,690	39,868	26,249	9,031
1941	133,402	10,850	24,516	9,840	11,807	40,383	26,718	9,288
1942	134,860	11,301	24,231	9,730	11,955	40,861	27,196	9,584
1943	136,739	12,016	24,093	9,607	12,064	41,420	27,671	9,867
1944	138,397	12,524	23,949	9,561	12,062	42,016	28,138	10,147
1945	139,928	12,979	23,907	9,361	12,036	42,521	28,630	10,494
1946	141,389	13,244	24,103	9,119	12,004	43,027	29,064	10,828
1947	144,126	14,406	24,468	9,097	11,814	43,657	29,498	11,185
1948	146,631	14,919	25,209	8,952	11,794	44,288	29,931	11,538
1949	149,188	15,607	25,852	8,788	11,700	44,916	30,405	11,921
1950	152,271	16,410	26,721	8,542	11,680	45,672	30,849	12,397
1951	154,878	17,333	27,279	8,446	11,552	46,103	31,362	12,803
1952	157,553	17,312	28,894	8,414	11,350	46,495	31,884	13,203
1953	160,184	17,638	30,227	8,460	11,062	46,786	32,394	13,617
1954	163,026	18,057	31,480	8,637	10,832	47,001	32,942	14,076
1955	165,931	18,566	32,682	8,744	10,714	47,194	33,506	14,525
1956	168,903	19,003	33,994	8,916	10,616	47,379	34,057	14,938
1957	171,984	19,494	35,272	9,195	10,603	47,440	34,591	15,388
1958	174,882	19,887	36,445	9,543	10,756	47,337	35,109	15,806
1959	177,830	20,175	37,368	10,215	10,969	47,192	35,663	16,248
1960	180,671	20,341	38,494	10,683	11,134	47,140	36,203	16,675
1961	183,691	20,522	39,765	11,025	11,483	47,084	36,722	17,089
1962	186,538	20,469	41,205	11,180	11,959	47,013	37,255	17,457
1963	189,242	20,342	41,626	12,007	12,714	46,994	37,782	17,778
1964	191,889	20,165	42,297	12,736	13,269	46,958	38,338	18,127
1965	194,303	19,824	42,938	13,516	13,746	46,912	38,916	18,451
1966	196,560	19,208	43,702	14,311	14,050	47,001	39,534	18,755
1967	198,712	18,563	44,244	14,200	15,248	47,194	40,193	19,071
1968	200,706	17,913	44,622	14,452	15,786	47,721	40,846	19,365
1969	202,677	17,376	44,840	14,800	16,480	48,064	41,437	19,680
1970	205,052	17,166	44,816	15,289	17,202	48,473	41,999	20,107
1971	207,661	17,244	44,591	15,688	18,159	48,936	42,482	20,561
1972	209,896	17,101	44,203	16,039	18,153	50,482	42,898	21,020
1973	211,909	16,851	43,582	16,446	18,521	51,749	43,235	21,525
1974	213,854	16,487	42,989	16,769	18,975	53,051	43,522	22,061
1975	215,973	16,121	42,508	17,017	19,527	54,302	43,801	22,696
1976	218,035	15,617	42,099	17,194	19,986	55,852	44,008	23,278
1977	220,239	15,564	41,298	17,276	20,499	57,561	44,150	23,892
1978	222,585	15,735	40,428	17,288	20,946	59,400	44,286	24,502
1979	225,055	16,063	39,552	17,242	21,297	61,379	44,390	25,134
1980	227,757	16,458	38,844	17,160	21,584	63,494	44,515	25,704
1981	230,138	16,931	38,190	16,770	21,821	65,619	44,569	26,236
1982	232,520	17,298	37,876	16,255	21,807	67,856	44,601	26,827
1983	234,799	17,650	37,668	15,704	21,700	69,970	44,678	27,428
1984	237,001	17,830	37,657	15,141	21,536	72,048	44,817	27,973
1985	239,283	18,017	37,691	14,819	21,214	74,076	44,931	28,536
1986	241,596	18,128	37,701	14,802	20,613	76,126	45,053	29,173
1987	243,773	....	....	....	....	....	....	....

Note.—Includes Armed Forces overseas beginning 1940. Includes Alaska and Hawaii beginning 1950.

Source: Department of Commerce, Bureau of the Census.

TABLE B-32.—*Population and the labor force, 1929–87*

[Monthly data seasonally adjusted, except as noted]

Period	Civilian noninstitutional population [1]	Resident Armed Forces [1]	Labor force including resident Armed Forces	Employment including resident Armed Forces	Civilian labor force					Unemployment rate		Civilian	
					Total	Employment			Unemployment	All workers [2]	Civilian workers	Labor force participation rate [3]	Employment/population ratio [4]
						Total	Agricultural	Nonagricultural					
	Thousands of persons 14 years of age and over									Percent			
1929	...	...	...	...	49,180	47,630	10,450	37,180	1,550	...	3.2	...	...
1933	...	...	...	...	51,590	38,760	10,090	28,670	12,830	...	24.9	...	...
1939	...	...	...	...	55,230	45,750	9,610	36,140	9,480	...	17.2	...	...
1940	99,840	...	...	...	55,640	47,520	9,540	37,980	8,120	...	14.6	55.7	47.6
1941	99,900	...	...	...	55,910	50,350	9,100	41,250	5,560	...	9.9	56.0	50.4
1942	98,640	...	...	...	56,410	53,750	9,250	44,500	2,660	...	4.7	57.2	54.5
1943	94,640	...	...	...	55,540	54,470	9,080	45,390	1,070	...	1.9	58.7	57.6
1944	93,220	...	...	...	54,630	53,960	8,950	45,010	670	...	1.2	58.6	57.9
1945	94,090	...	...	...	53,860	52,820	8,580	44,240	1,040	...	1.9	57.2	56.1
1946	103,070	...	...	...	57,520	55,250	8,320	46,930	2,270	...	3.9	55.8	53.6
1947	106,018	...	...	...	60,168	57,812	8,256	49,557	2,356	...	3.9	56.8	54.5
	Thousands of persons 16 years of age and over												
1947	101,827	...	...	...	59,350	57,038	7,890	49,148	2,311	...	3.9	58.3	56.0
1948	103,068	...	...	...	60,621	58,343	7,629	50,714	2,276	...	3.8	58.8	56.6
1949	103,994	...	...	...	61,286	57,651	7,658	49,993	3,637	...	5.9	58.9	55.4
1950	104,995	1,169	63,377	60,087	62,208	58,918	7,160	51,758	3,288	5.2	5.3	59.2	56.1
1951	104,621	2,143	64,160	62,104	62,017	59,961	6,726	53,235	2,055	3.2	3.3	59.2	57.3
1952	105,231	2,386	64,524	62,636	62,138	60,250	6,500	53,749	1,883	2.9	3.0	59.0	57.3
1953 [5]	107,056	2,231	65,246	63,410	63,015	61,179	6,260	54,919	1,834	2.8	2.9	58.9	57.1
1954	108,321	2,142	65,785	62,251	63,643	60,109	6,205	53,904	3,532	5.4	5.5	58.8	55.5
1955	109,683	2,064	67,087	64,234	65,023	62,170	6,450	55,722	2,852	4.3	4.4	59.3	56.7
1956	110,954	1,965	68,517	65,764	66,552	63,799	6,283	57,514	2,750	4.0	4.1	60.0	57.5
1957	112,265	1,948	68,877	66,019	66,929	64,071	5,947	58,123	2,859	4.2	4.3	59.6	57.1
1958	113,727	1,847	69,486	64,883	67,639	63,036	5,586	57,450	4,602	6.6	6.8	59.5	55.4
1959	115,329	1,788	70,157	66,418	68,369	64,630	5,565	59,065	3,740	5.3	5.5	59.3	56.0
1960 [5]	117,245	1,861	71,489	67,639	69,628	65,778	5,458	60,318	3,852	5.4	5.5	59.4	56.1
1961	118,771	1,900	72,359	67,646	70,459	65,746	5,200	60,546	4,714	6.5	6.7	59.3	55.4
1962 [5]	120,153	2,061	72,675	68,763	70,614	66,702	4,944	61,759	3,911	5.4	5.5	58.8	55.5
1963	122,416	2,006	73,839	69,768	71,833	67,762	4,687	63,076	4,070	5.5	5.7	58.7	55.4
1964	124,485	2,018	75,109	71,323	73,091	69,305	4,523	64,782	3,786	5.0	5.2	58.7	55.7
1965	126,513	1,946	76,401	73,034	74,455	71,088	4,361	66,726	3,366	4.4	4.5	58.9	56.2
1966	128,058	2,122	77,892	75,017	75,770	72,895	3,979	68,915	2,875	3.7	3.8	59.2	56.9
1967	129,874	2,218	79,565	76,590	77,347	74,372	3,844	70,527	2,975	3.7	3.8	59.6	57.3
1968	132,028	2,253	80,990	78,173	78,737	75,920	3,817	72,103	2,817	3.5	3.6	59.6	57.5
1969	134,335	2,238	82,972	80,140	80,734	77,902	3,606	74,296	2,832	3.4	3.5	60.1	58.0
1970	137,085	2,118	84,889	80,796	82,771	78,678	3,463	75,215	4,093	4.8	4.9	60.4	57.4
1971	140,216	1,973	86,355	81,340	84,382	79,367	3,394	75,972	5,016	5.8	5.9	60.2	56.6
1972 [5]	144,126	1,813	88,847	83,966	87,034	82,153	3,484	78,669	4,882	5.5	5.6	60.4	57.0
1973 [5]	147,096	1,774	91,203	86,838	89,429	85,064	3,470	81,594	4,365	4.8	4.9	60.8	57.8
1974	150,120	1,721	93,670	88,515	91,949	86,794	3,515	83,279	5,156	5.5	5.6	61.3	57.8
1975	153,153	1,678	95,453	87,524	93,775	85,846	3,408	82,438	7,929	8.3	8.5	61.2	56.1
1976	156,150	1,668	97,826	90,420	96,158	88,752	3,331	85,421	7,406	7.6	7.7	61.6	56.8
1977	159,033	1,656	100,665	93,673	99,009	92,017	3,283	88,734	6,991	6.9	7.1	62.3	57.9
1978 [5]	161,910	1,631	103,882	97,679	102,251	96,048	3,387	92,661	6,202	6.0	6.1	63.2	59.3
1979	164,863	1,597	106,559	100,421	104,962	98,824	3,347	95,477	6,137	5.8	5.8	63.7	59.9
1980	167,745	1,604	108,544	100,907	106,940	99,303	3,364	95,938	7,637	7.0	7.1	63.8	59.2
1981	170,130	1,645	110,315	102,042	108,670	100,397	3,368	97,030	8,273	7.5	7.6	63.9	59.0
1982	172,271	1,668	111,872	101,194	110,204	99,526	3,401	96,125	10,678	9.5	9.7	64.0	57.8
1983	174,215	1,676	113,226	102,510	111,550	100,834	3,383	97,450	10,717	9.5	9.6	64.0	57.9
1984	176,383	1,697	115,241	106,702	113,544	105,005	3,321	101,685	8,539	7.4	7.5	64.4	59.5
1985	178,206	1,706	117,167	108,856	115,461	107,150	3,179	103,971	8,312	7.1	7.2	64.8	60.1
1986 [5]	180,587	1,706	119,540	111,303	117,834	109,597	3,163	106,434	8,237	6.9	7.0	65.3	60.7
1987	182,753	1,737	121,602	114,177	119,865	112,440	3,208	109,232	7,425	6.1	6.2	65.6	61.5
1983: Jan	173,354	1,667	112,362	100,828	110,695	99,161	3,439	95,722	11,534	10.3	10.4	63.9	57.2
Feb	173,505	1,664	112,298	100,753	110,634	99,089	3,382	95,707	11,545	10.3	10.4	63.8	57.1
Mar	173,656	1,664	112,251	100,843	110,587	99,179	3,360	95,819	11,408	10.2	10.3	63.7	57.1
Apr	173,794	1,671	112,499	101,231	110,828	99,560	3,341	96,219	11,268	10.0	10.2	63.8	57.3
May	173,953	1,669	112,465	101,311	110,796	99,642	3,328	96,314	11,154	9.9	10.1	63.7	57.3
June	174,125	1,668	113,547	102,301	111,879	100,633	3,462	97,171	11,246	9.9	10.1	64.3	57.8
July	174,306	1,664	113,420	102,872	111,756	101,208	3,481	97,727	10,548	9.3	9.4	64.1	58.1
Aug	174,440	1,682	113,913	103,290	112,231	101,608	3,502	98,106	10,623	9.3	9.5	64.3	58.2
Sept	174,602	1,695	113,993	103,711	112,298	102,016	3,347	98,669	10,282	9.0	9.2	64.3	58.4
Oct	174,779	1,695	113,621	103,734	111,926	102,039	3,303	98,736	9,887	8.7	8.8	64.0	58.4
Nov	174,951	1,685	113,913	104,414	112,228	102,729	3,291	99,438	9,499	8.3	8.5	64.1	58.7
Dec	175,121	1,688	114,015	104,684	112,327	102,996	3,332	99,664	9,331	8.2	8.3	64.1	58.8

See next page for continuation of table.

TABLE B-32.—*Population and the labor force, 1929–87—Continued*

[Monthly data seasonally adjusted, except as noted]

Period	Civilian noninstitutional population[1]	Resident Armed Forces[1]	Labor force including resident Armed Forces	Employment including resident Armed Forces	Civilian labor force					Unemployment rate		Civilian	
					Total	Employment			Unemployment	All workers[2]	Civilian workers	Labor force participation rate[3]	Employment/population ratio[4]
						Total	Agricultural	Nonagricultural					
	Thousands of persons 16 years of age and over									Percent			
1984: Jan	175,533	1,686	113,899	104,883	112,213	103,197	3,296	99,901	9,016	7.9	8.0	63.9	58.8
Feb	175,679	1,684	114,314	105,511	112,630	103,827	3,354	100,473	8,803	7.7	7.8	64.1	59.1
Mar	175,824	1,686	114,397	105,659	112,711	103,973	3,234	100,739	8,738	7.6	7.8	64.1	59.1
Apr	175,969	1,693	114,822	106,058	113,129	104,365	3,309	101,056	8,764	7.6	7.7	64.3	59.3
May	176,123	1,690	115,310	106,849	113,620	105,159	3,319	101,840	8,461	7.3	7.4	64.5	59.7
June	176,284	1,690	115,521	107,300	113,831	105,610	3,377	102,233	8,221	7.1	7.2	64.6	59.9
July	176,440	1,698	115,645	107,127	113,947	105,429	3,340	102,089	8,518	7.4	7.5	64.6	59.8
Aug	176,583	1,712	115,404	106,879	113,692	105,167	3,295	101,872	8,525	7.4	7.5	64.4	59.6
Sept	176,763	1,720	115,556	107,198	113,836	105,478	3,388	102,090	8,358	7.2	7.3	64.4	59.7
Oct	176,956	1,705	115,720	107,339	114,015	105,634	3,195	102,439	8,381	7.2	7.4	64.4	59.7
Nov	177,135	1,699	115,884	107,684	114,185	105,985	3,400	102,585	8,200	7.1	7.2	64.5	59.8
Dec	177,306	1,698	116,268	107,910	114,570	106,212	3,387	102,825	8,358	7.2	7.3	64.6	59.9
1985: Jan	177,384	1,697	116,457	107,993	114,760	106,296	3,331	102,965	8,464	7.3	7.4	64.7	59.9
Feb	177,516	1,703	116,606	108,276	114,903	106,573	3,325	103,248	8,330	7.1	7.2	64.7	60.0
Mar	177,667	1,701	117,012	108,691	115,311	106,990	3,260	103,730	8,321	7.1	7.2	64.9	60.2
Apr	177,799	1,702	117,040	108,644	115,338	106,942	3,319	103,623	8,396	7.2	7.3	64.9	60.1
May	177,944	1,705	116,916	108,612	115,211	106,907	3,238	103,669	8,304	7.1	7.2	64.7	60.1
June	178,096	1,702	116,723	108,309	115,021	106,607	3,147	103,460	8,414	7.2	7.3	64.6	59.9
July	178,263	1,704	116,993	108,513	115,289	106,809	3,134	103,675	8,480	7.2	7.4	64.7	59.9
Aug	178,405	1,726	117,037	108,851	115,311	107,125	3,141	103,984	8,186	7.0	7.1	64.6	60.0
Sept	178,572	1,732	117,613	109,367	115,881	107,635	3,059	104,576	8,246	7.0	7.1	64.9	60.3
Oct	178,770	1,700	117,787	109,488	116,087	107,788	3,059	104,729	8,299	7.0	7.1	64.9	60.3
Nov	178,940	1,702	117,857	109,702	116,155	108,000	3,073	104,927	8,155	6.9	7.0	64.9	60.4
Dec	179,112	1,698	118,017	109,861	116,319	108,163	3,147	105,016	8,156	6.9	7.0	64.9	60.4
1986: Jan[5]	179,670	1,691	118,442	110,595	116,751	108,904	3,307	105,597	7,847	6.6	6.7	65.0	60.6
Feb	179,821	1,691	118,642	110,215	116,951	108,524	3,097	105,427	8,427	7.1	7.2	65.0	60.4
Mar	179,985	1,693	118,876	110,546	117,183	108,853	3,213	105,640	8,330	7.0	7.1	65.1	60.5
Apr	180,148	1,695	119,029	110,656	117,334	108,961	3,168	105,793	8,373	7.0	7.1	65.1	60.5
May	180,311	1,687	119,168	110,724	117,481	109,037	3,099	105,938	8,444	7.1	7.2	65.2	60.5
June	180,503	1,680	119,792	111,351	118,112	109,671	3,176	106,495	8,441	7.0	7.1	65.4	60.8
July	180,682	1,672	119,787	111,509	118,115	109,837	3,127	106,710	8,278	6.9	7.0	65.4	60.8
Aug	180,828	1,697	119,847	111,732	118,150	110,035	3,106	106,929	8,115	6.8	6.9	65.3	60.9
Sept	180,997	1,716	120,061	111,763	118,345	110,047	3,164	106,883	8,298	6.9	7.0	65.4	60.8
Oct	181,186	1,749	120,173	111,943	118,424	110,194	3,142	107,052	8,230	6.8	6.9	65.4	60.8
Nov	181,363	1,751	120,422	112,208	118,671	110,457	3,233	107,224	8,214	6.8	6.9	65.4	60.9
Dec	181,547	1,750	120,326	112,407	118,576	110,657	3,153	107,504	7,919	6.6	6.7	65.3	61.0
1987: Jan	181,827	1,748	120,726	112,762	118,978	111,014	3,174	107,840	7,964	6.6	6.7	65.4	61.1
Feb	181,998	1,740	120,970	113,084	119,230	111,344	3,225	108,119	7,886	6.5	6.6	65.5	61.2
Mar	182,179	1,736	120,982	113,191	119,246	111,455	3,237	108,218	7,791	6.4	6.5	65.5	61.2
Apr	182,344	1,735	121,098	113,541	119,363	111,806	3,250	108,556	7,557	6.2	6.3	65.5	61.3
May	182,533	1,726	121,633	114,060	119,907	112,334	3,269	109,065	7,573	6.2	6.3	65.7	61.5
June	182,703	1,718	121,326	114,018	119,608	112,300	3,192	109,108	7,308	6.0	6.1	65.5	61.5
July	182,885	1,720	121,610	114,359	119,890	112,639	3,212	109,427	7,251	6.0	6.0	65.6	61.6
Aug	183,002	1,736	122,042	114,786	120,306	113,050	3,143	109,907	7,256	5.9	6.0	65.7	61.8
Sept	183,161	1,743	121,706	114,615	119,963	112,872	3,184	109,688	7,091	5.8	5.9	65.5	61.6
Oct	183,311	1,741	122,128	114,951	120,387	113,210	3,249	109,961	7,177	5.9	6.0	65.7	61.8
Nov	183,470	1,755	122,349	115,259	120,594	113,504	3,172	110,332	7,090	5.8	5.9	65.7	61.9
Dec	183,620	1,750	122,472	115,494	120,722	113,744	3,215	110,529	6,978	5.7	5.8	65.7	61.9

[1] Not seasonally adjusted.

[2] Unemployed as percent of labor force including resident Armed Forces.

[3] Civilian labor force as percent of civilian noninstitutional population.

[4] Civilian employment as percent of civilian noninstitutional population.

[5] Not strictly comparable with earlier data due to population adjustments as follows: Beginning 1953, introduction of 1950 census data added about 600,000 to population and 350,000 to labor force, total employment, and agricultural employment. Beginning 1960, inclusion of Alaska and Hawaii added about 500,000 to population, 300,000 to labor force, and 240,000 to nonagricultural employment. Beginning 1962, introduction of 1960 census data reduced population by about 50,000 and labor force and employment by 200,000. Beginning 1972, introduction of 1970 census data added about 800,000 to civilian noninstitutional population and 333,000 to labor force and employment. A subsequent adjustment based on 1970 census in March 1973 added 60,000 to labor force and to employment. Beginning 1978, changes in sampling and estimation procedures introduced into the household survey added about 250,000 to labor force and to employment. Unemployment levels and rates were not significantly affected. Beginning 1986, the introduction of revised population controls added about 400,000 to the civilian population and labor force and 350,000 to civilian employment. Unemployment levels and rates were not significantly affected.

Note.—Labor force data in Tables B-32 through B-41 are based on household interviews and relate to the calendar week including the 12th of the month. For definitions of terms, area samples used, historical comparability of the data, comparability with other series, etc., see "Employment and Earnings."

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B-33.—*Civilian employment and unemployment by sex and age, 1947–87*

[Thousands of persons 16 years of age and over; monthly data seasonally adjusted]

Year or month	Civilian employment							Unemployment						
	Total	Males			Females			Total	Males			Females		
		Total	16–19 years	20 years and over	Total	16–19 years	20 years and over		Total	16–19 years	20 years and over	Total	16–19 years	20 years and over
1947	57,038	40,995	2,218	38,776	16,045	1,691	14,354	2,311	1,692	270	1,422	619	144	475
1948	58,343	41,725	2,344	39,382	16,617	1,682	14,936	2,276	1,559	256	1,305	717	153	564
1949	57,651	40,925	2,124	38,803	16,723	1,588	15,137	3,637	2,572	353	2,219	1,065	223	841
1950	58,918	41,578	2,186	39,394	17,340	1,517	15,824	3,288	2,239	318	1,922	1,049	195	854
1951	59,961	41,780	2,156	39,626	18,181	1,611	16,570	2,055	1,221	191	1,029	834	145	689
1952	60,250	41,682	2,107	39,578	18,568	1,612	16,958	1,883	1,185	205	980	698	140	559
1953 [1]	61,179	42,430	2,136	40,296	18,749	1,584	17,164	1,834	1,202	184	1,019	632	123	510
1954	60,109	41,619	1,985	39,634	18,490	1,490	17,000	3,532	2,344	310	2,035	1,188	191	997
1955	62,170	42,621	2,095	40,526	19,551	1,547	18,002	2,852	1,854	274	1,580	998	176	823
1956	63,799	43,379	2,164	41,216	20,419	1,654	18,767	2,750	1,711	269	1,442	1,039	209	832
1957	64,071	43,357	2,115	41,239	20,714	1,663	19,052	2,859	1,841	300	1,541	1,018	197	821
1958	63,036	42,423	2,012	40,411	20,613	1,570	19,043	4,602	3,098	416	2,681	1,504	262	1,242
1959	64,630	43,466	2,198	41,267	21,164	1,640	19,524	3,740	2,420	398	2,022	1,320	256	1,063
1960 [1]	65,778	43,904	2,361	41,543	21,874	1,768	20,105	3,852	2,486	426	2,060	1,366	286	1,080
1961	65,746	43,656	2,315	41,342	22,090	1,793	20,296	4,714	2,997	479	2,518	1,717	349	1,368
1962 [1]	66,702	44,177	2,362	41,815	22,525	1,833	20,693	3,911	2,423	408	2,016	1,488	313	1,175
1963	67,762	44,657	2,406	42,251	23,105	1,849	21,257	4,070	2,472	501	1,971	1,598	383	1,216
1964	69,305	45,474	2,587	42,886	23,831	1,929	21,903	3,786	2,205	487	1,718	1,581	385	1,195
1965	71,088	46,340	2,918	43,422	24,748	2,118	22,630	3,366	1,914	479	1,435	1,452	395	1,056
1966	72,895	46,919	3,253	43,668	25,976	2,468	23,510	2,875	1,551	432	1,120	1,324	405	921
1967	74,372	47,479	3,186	44,294	26,893	2,496	24,397	2,975	1,508	448	1,060	1,468	391	1,078
1968	75,920	48,114	3,255	44,859	27,807	2,526	25,281	2,817	1,419	426	993	1,397	412	985
1969	77,902	48,818	3,430	45,388	29,084	2,687	26,397	2,832	1,403	440	963	1,429	413	1,015
1970	78,678	48,990	3,409	45,581	29,688	2,735	26,952	4,093	2,238	599	1,638	1,855	506	1,349
1971	79,367	49,390	3,478	45,912	29,976	2,730	27,246	5,016	2,789	693	2,097	2,227	568	1,658
1972 [1]	82,153	50,896	3,765	47,130	31,257	2,980	28,276	4,882	2,659	711	1,948	2,222	598	1,625
1973 [1]	85,064	52,349	4,039	48,310	32,715	3,231	29,484	4,365	2,275	653	1,624	2,089	583	1,507
1974	86,794	53,024	4,103	48,922	33,769	3,345	30,424	5,156	2,714	757	1,957	2,441	665	1,777
1975	85,846	51,857	3,839	48,018	33,989	3,263	30,726	7,929	4,442	966	3,476	3,486	802	2,684
1976	88,752	53,138	3,947	49,190	35,615	3,389	32,226	7,406	4,036	939	3,098	3,369	780	2,588
1977	92,017	54,728	4,174	50,555	37,289	3,514	33,775	6,991	3,667	874	2,794	3,324	789	2,535
1978 [1]	96,048	56,479	4,336	52,143	39,569	3,734	35,836	6,202	3,142	813	2,328	3,061	769	2,292
1979	98,824	57,607	4,300	53,308	41,217	3,783	37,434	6,137	3,120	811	2,308	3,018	743	2,276
1980	99,303	57,186	4,085	53,101	42,117	3,625	38,492	7,637	4,267	913	3,353	3,370	755	2,615
1981	100,397	57,397	3,815	53,582	43,000	3,411	39,590	8,273	4,577	962	3,615	3,696	800	2,895
1982	99,526	56,271	3,379	52,891	43,256	3,170	40,086	10,678	6,179	1,090	5,089	4,499	886	3,613
1983	100,834	56,787	3,300	53,487	44,047	3,043	41,004	10,717	6,260	1,003	5,257	4,457	825	3,632
1984	105,005	59,091	3,322	55,769	45,915	3,122	42,793	8,539	4,744	812	3,932	3,794	687	3,107
1985	107,150	59,891	3,328	56,562	47,259	3,105	44,154	8,312	4,521	806	3,715	3,791	661	3,129
1986 [1]	109,597	60,892	3,323	57,569	48,706	3,149	45,556	8,237	4,530	779	3,751	3,707	675	3,032
1987	112,440	62,107	3,381	58,726	50,334	3,260	47,074	7,425	4,101	732	3,369	3,324	616	2,709
1986: Jan [1]	108,904	60,831	3,225	57,606	48,073	3,093	44,980	7,847	4,244	723	3,521	3,603	683	2,920
Feb	108,524	60,558	3,264	57,294	47,966	3,138	44,828	8,427	4,554	788	3,766	3,873	693	3,180
Mar	108,853	60,658	3,297	57,361	48,195	3,211	44,984	8,330	4,548	770	3,778	3,782	673	3,109
Apr	108,961	60,710	3,336	57,374	48,251	3,154	45,097	8,373	4,541	817	3,724	3,832	730	3,102
May	109,037	60,623	3,350	57,273	48,414	3,141	45,273	8,444	4,657	821	3,836	3,787	671	3,116
June	109,671	60,880	3,330	57,550	48,791	3,168	45,623	8,441	4,610	819	3,791	3,831	698	3,133
July	109,837	60,898	3,347	57,551	48,939	3,124	45,815	8,278	4,602	782	3,820	3,676	651	3,025
Aug	110,035	60,974	3,354	57,620	49,061	3,157	45,904	8,115	4,454	793	3,661	3,661	656	3,005
Sept	110,047	60,985	3,360	57,625	49,062	3,122	45,940	8,298	4,632	801	3,831	3,666	675	2,991
Oct	110,194	60,974	3,367	57,607	49,220	3,207	46,013	8,230	4,570	753	3,817	3,660	653	3,007
Nov	110,457	61,253	3,360	57,893	49,204	3,127	46,077	8,214	4,570	763	3,807	3,644	673	2,971
Dec	110,657	61,367	3,247	58,120	49,290	3,169	46,121	7,919	4,449	721	3,728	3,470	644	2,826
1987: Jan	111,014	61,562	3,342	58,220	49,452	3,162	46,290	7,964	4,449	758	3,691	3,515	638	2,877
Feb	111,344	61,697	3,373	58,324	49,647	3,162	46,485	7,886	4,374	768	3,606	3,512	654	2,858
Mar	111,455	61,688	3,308	58,380	49,767	3,185	46,582	7,791	4,327	774	3,553	3,464	632	2,832
Apr	111,806	61,815	3,299	58,516	49,991	3,230	46,761	7,557	4,214	760	3,454	3,343	610	2,733
May	112,334	61,977	3,304	58,673	50,357	3,329	47,028	7,573	4,259	803	3,456	3,314	614	2,700
June	112,300	61,984	3,352	58,632	50,316	3,228	47,088	7,308	4,080	658	3,422	3,228	594	2,634
July	112,639	62,150	3,367	58,783	50,489	3,283	47,206	7,251	3,960	637	3,323	3,291	611	2,680
Aug	113,050	62,341	3,516	58,825	50,709	3,401	47,308	7,256	4,021	763	3,258	3,235	574	2,661
Sept	112,872	62,368	3,401	58,967	50,504	3,253	47,251	7,091	3,827	709	3,118	3,264	593	2,671
Oct	113,210	62,468	3,431	59,037	50,742	3,262	47,480	7,177	3,899	725	3,174	3,278	663	2,615
Nov	113,504	62,581	3,417	59,164	50,923	3,289	47,634	7,090	3,845	710	3,135	3,245	625	2,620
Dec	113,744	62,656	3,471	59,185	51,088	3,338	47,750	6,978	3,785	722	3,063	3,193	582	2,611

[1] See footnote 5, Table B-32.

Note.—See Note, Table B-32.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–34.—*Civilian employment by demographic characteristic, 1954–87*

[Thousands of persons 16 years of age and over; monthly data seasonally adjusted]

Year or month	All civilian workers	White				Black and other				Black			
		Total	Males	Females	Both sexes 16–19	Total	Males	Females	Both sexes 16–19	Total	Males	Females	Both sexes 16–19 month
1954	60,109	53,957	37,846	16,111	3,078	6,152	3,773	2,379	396	......	......	......	......
1955	62,170	55,833	38,719	17,114	3,225	6,341	3,904	2,437	418	......	......	......	......
1956	63,799	57,269	39,368	17,901	3,389	6,534	4,013	2,521	430	......	......	......	......
1957	64,071	57,465	39,349	18,116	3,374	6,604	4,006	2,598	407	......	......	......	......
1958	63,036	56,613	38,591	18,022	3,216	6,423	3,833	2,590	365	......	......	......	......
1959	64,630	58,006	39,494	18,512	3,475	6,623	3,971	2,652	362	......	......	......	......
1960	65,778	58,850	39,755	19,095	3,700	6,928	4,149	2,779	430	......	......	......	......
1961	65,746	58,913	39,588	19,325	3,693	6,833	4,068	2,765	414	......	......	......	......
1962	66,702	59,698	40,016	19,682	3,774	7,003	4,160	2,843	420	......	......	......	......
1963	67,762	60,622	40,428	20,194	3,851	7,140	4,229	2,911	404	......	......	......	......
1964	69,305	61,922	41,115	20,807	4,076	7,383	4,359	3,024	440	......	......	......	......
1965	71,088	63,446	41,844	21,602	4,562	7,643	4,496	3,147	474	......	......	......	......
1966	72,895	65,021	42,331	22,690	5,176	7,877	4,588	3,289	545	......	......	......	......
1967	74,372	66,361	42,833	23,528	5,114	8,011	4,646	3,365	568	......	......	......	......
1968	75,920	67,750	43,411	24,339	5,195	8,169	4,702	3,467	584	......	......	......	......
1969	77,902	69,518	44,048	25,470	5,508	8,384	4,770	3,614	609	......	......	......	......
1970	78,678	70,217	44,178	26,039	5,571	8,464	4,813	3,650	574	......	......	......	......
1971	79,367	70,878	44,595	26,283	5,670	8,488	4,796	3,692	538	......	......	......	......
1972	82,153	73,370	45,944	27,426	6,173	8,783	4,952	3,832	573	7,802	4,368	3,433	509
1973	85,064	75,708	47,085	28,623	6,623	9,356	5,265	4,092	647	8,128	4,527	3,601	570
1974	86,794	77,184	47,674	29,511	6,796	9,610	5,352	4,258	652	8,203	4,527	3,677	554
1975	85,846	76,411	46,697	29,714	6,487	9,435	5,161	4,275	615	7,894	4,275	3,618	507
1976	88,752	78,853	47,775	31,078	6,724	9,899	5,363	4,536	611	8,227	4,404	3,823	508
1977	92,017	81,700	49,150	32,550	7,068	10,317	5,579	4,739	619	8,540	4,565	3,975	508
1978	96,048	84,936	50,544	34,392	7,367	11,112	5,936	5,177	703	9,102	4,796	4,307	571
1979	98,824	87,259	51,452	35,807	7,356	11,565	6,156	5,409	727	9,359	4,923	4,436	579
1980	99,303	87,715	51,127	36,587	7,021	11,588	6,059	5,529	689	9,313	4,798	4,515	547
1981	100,397	88,709	51,315	37,394	6,588	11,688	6,083	5,606	637	9,355	4,794	4,561	505
1982	99,526	87,903	50,287	37,615	5,984	11,624	5,983	5,641	565	9,189	4,637	4,552	428
1983	100,834	88,893	50,621	38,272	5,799	11,941	6,166	5,775	543	9,375	4,753	4,622	416
1984	105,005	92,120	52,462	39,659	5,836	12,885	6,629	6,256	607	10,119	5,124	4,995	474
1985	107,150	93,736	53,046	40,690	5,768	13,414	6,845	6,569	566	10,501	5,270	5,231	532
1986	109,597	95,660	53,785	41,876	5,792	13,937	7,107	6,830	681	10,814	5,428	5,386	536
1987	112,440	97,789	54,647	43,142	5,898	14,652	7,459	7,192	742	11,309	5,661	5,648	587
1986: Jan	108,904	95,136	53,787	41,349	5,687	13,792	7,076	6,716	652	10,720	5,403	5,317	522
Feb	108,524	94,775	53,559	41,216	5,778	13,761	7,027	6,734	688	10,694	5,377	5,317	546
Mar	108,853	95,020	53,569	41,451	5,837	13,855	7,080	6,775	687	10,786	5,422	5,364	543
Apr	108,961	95,109	53,632	41,477	5,787	13,839	7,067	6,772	696	10,828	5,432	5,396	551
May	109,037	95,098	53,481	41,617	5,788	13,901	7,111	6,790	688	10,880	5,487	5,393	562
June	109,671	95,735	53,758	41,977	5,799	13,930	7,121	6,809	700	10,829	5,446	5,383	559
July	109,837	95,854	53,738	42,116	5,762	13,961	7,140	6,821	681	10,809	5,430	5,379	517
Aug	110,035	96,114	53,888	42,226	5,811	13,853	7,042	6,811	619	10,669	5,340	5,329	572
Sept	110,047	96,046	53,880	42,166	5,811	13,974	7,102	6,872	670	10,798	5,389	5,409	531
Oct	110,194	96,162	53,869	42,293	5,883	14,092	7,141	6,951	715	10,883	5,430	5,453	560
Nov	110,457	96,343	54,094	42,249	5,819	14,111	7,158	6,953	678	10,904	5,450	5,454	535
Dec	110,657	96,544	54,188	42,356	5,750	14,174	7,228	6,946	689	10,968	5,530	5,438	538
1987: Jan	111,014	96,749	54,273	42,476	5,840	14,295	7,321	6,974	680	10,995	5,553	5,442	517
Feb	111,344	97,001	54,403	42,598	5,880	14,320	7,304	7,016	695	11,086	5,565	5,521	554
Mar	111,455	97,074	54,323	42,751	5,813	14,392	7,353	7,039	683	11,072	5,579	5,493	544
Apr	111,806	97,338	54,403	42,935	5,846	14,467	7,408	7,059	679	11,114	5,600	5,514	538
May	112,334	97,829	54,591	43,238	5,935	14,475	7,357	7,118	679	11,129	5,570	5,559	541
Jun	112,300	97,698	54,553	43,145	5,842	14,582	7,410	7,172	731	11,238	5,614	5,624	570
July	112,639	97,917	54,651	43,266	5,904	14,725	7,485	7,240	736	11,381	5,689	5,692	580
Aug	113,050	98,181	54,779	43,402	6,017	14,804	7,518	7,286	822	11,513	5,750	5,763	676
Sept	112,872	98,069	54,801	43,268	5,857	14,778	7,559	7,219	795	11,421	5,738	5,683	643
Oct	113,210	98,317	54,895	43,422	5,915	14,946	7,601	7,345	797	11,556	5,753	5,803	630
Nov	113,504	98,492	54,976	43,516	5,917	15,017	7,613	7,404	805	11,589	5,763	5,826	622
Dec	113,744	98,779	55,111	43,668	6,021	15,008	7,582	7,426	794	11,605	5,754	5,851	631

Note.—See footnote 5 and Note, Table B-32.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B-35.—*Civilian unemployment by demographic characteristic, 1954–87*

[Thousands of persons 16 years of age and over; monthly data seasonally adjusted]

Year or month	All civilian workers	White				Black and other				Black			
		Total	Males	Females	Both sexes 16–19	Total	Males	Females	Both sexes 16–19	Total	Males	Females	Both sexes 16–19
1954	3,532	2,859	1,913	946	423	673	431	242	79	......	......	......	......
1955	2,852	2,252	1,478	774	373	601	376	225	77	......	......	......	......
1956	2,750	2,159	1,366	793	382	591	345	246	95	......	......	......	......
1957	2,859	2,289	1,477	812	401	570	364	206	96	......	......	......	......
1958	4,602	3,680	2,489	1,191	541	923	610	313	138	......	......	......	......
1959	3,740	2,946	1,903	1,043	525	793	517	276	128	......	......	......	......
1960	3,852	3,065	1,988	1,077	575	788	498	290	138	......	......	......	......
1961	4,714	3,743	2,398	1,345	669	971	599	372	159	......	......	......	......
1962	3,911	3,052	1,915	1,137	580	861	509	352	142	......	......	......	......
1963	4,070	3,208	1,976	1,232	708	863	496	367	176	......	......	......	......
1964	3,786	2,999	1,779	1,220	708	787	426	361	165	......	......	......	......
1965	3,366	2,691	1,556	1,135	705	678	360	318	171	......	......	......	......
1966	2,875	2,255	1,241	1,014	651	622	310	312	186	......	......	......	......
1967	2,975	2,338	1,208	1,130	635	638	300	338	203	......	......	......	......
1968	2,817	2,226	1,142	1,084	644	590	277	313	194	......	......	......	......
1969	2,832	2,260	1,137	1,123	660	571	267	304	193	......	......	......	......
1970	4,093	3,339	1,857	1,482	871	754	380	374	235	......	......	......	......
1971	5,016	4,085	2,309	1,777	1,011	930	481	450	249	......	......	......	......
1972	4,882	3,906	2,173	1,733	1,021	977	486	491	288	906	448	458	279
1973	4,365	3,442	1,836	1,606	955	924	440	484	280	846	395	451	262
1974	5,156	4,097	2,169	1,927	1,104	1,058	544	514	318	965	494	470	297
1975	7,929	6,421	3,627	2,794	1,413	1,507	815	692	355	1,369	741	629	330
1976	7,406	5,914	3,258	2,656	1,364	1,492	779	713	355	1,334	698	637	330
1977	6,991	5,441	2,883	2,558	1,284	1,550	784	766	379	1,393	698	695	354
1978	6,202	4,698	2,411	2,287	1,189	1,505	731	774	394	1,330	641	690	360
1979	6,137	4,664	2,405	2,260	1,193	1,473	714	759	362	1,319	636	683	333
1980	7,637	5,884	3,345	2,540	1,291	1,752	922	830	377	1,553	815	738	343
1981	8,273	6,343	3,580	2,762	1,374	1,930	997	933	388	1,731	891	840	357
1982	10,678	8,241	4,846	3,395	1,534	2,437	1,334	1,104	443	2,142	1,167	975	396
1983	10,717	8,128	4,859	3,270	1,387	2,588	1,401	1,187	441	2,272	1,213	1,059	392
1984	8,539	6,372	3,600	2,772	1,116	2,167	1,144	1,022	384	1,914	1,003	911	353
1985	8.312	6,191	3,426	2,765	1,074	2,121	1,095	1,026	394	1,864	951	913	357
1986	8,237	6,140	3,433	2,708	1,070	2,097	1,097	999	383	1,840	946	894	347
1987	7,425	5,501	3,132	2,369	995	1,924	969	955	353	1,684	826	858	312
1986: Jan	7,847	5,799	3,159	2,640	1,015	2,053	1,085	968	401	1,822	946	876	368
Feb	8,427	6,346	3,446	2,900	1,096	2,082	1,105	977	388	1,827	953	874	351
Mar	8,330	6,223	3,449	2,774	1,010	2,121	1,102	1,019	435	1,859	962	897	393
Apr	8,373	6,205	3,438	2,767	1,119	2,171	1,111	1,060	429	1,887	952	935	388
May	8,444	6,304	3,547	2,757	1,088	2,146	1,115	1,031	411	1,864	949	915	364
June	8,441	6,290	3,515	2,775	1,115	2,198	1,137	1,061	418	1,913	971	942	368
July	8,278	6,198	3,490	2,708	1,049	2,046	1,105	941	348	1,798	947	851	329
Aug	8,115	5,984	3,320	2,664	1,070	2,100	1,095	1,005	379	1,848	945	903	342
Sept	8,298	6,178	3,514	2,664	1,093	2,136	1,129	1,007	384	1,868	979	889	347
Oct	8,230	6,148	3,472	2,676	1,059	2,063	1,100	963	335	1,844	967	877	313
Nov	8,214	6,147	3,498	2,649	1,105	2,069	1,074	995	341	1,819	914	905	301
Dec	7,919	5,930	3,416	2,514	1,027	1,989	1,020	969	344	1,738	861	877	311
1987: Jan	7,964	5,920	3,391	2,529	1,038	2,046	1,052	994	368	1,812	895	917	333
Feb	7,886	5,824	3,332	2,492	1,044	2,061	1,031	1,030	383	1,808	885	923	339
Mar	7,791	5,762	3,321	2,441	1,049	2,042	1,007	1,035	356	1,781	856	925	320
Apr	7,557	5,634	3,238	2,396	1,018	1,935	993	942	354	1,664	827	837	317
May	7,573	5,587	3,219	2,368	1,061	1,997	1,048	949	361	1,760	911	849	324
June	7,308	5,452	3,149	2,303	944	1,892	963	929	322	1,654	819	835	286
July	7,251	5,331	2,992	2,339	905	1,886	960	926	314	1,658	823	835	282
Aug	7,256	5,335	3,016	2,319	984	1,893	973	920	350	1,637	821	816	298
Sept	7,091	5,288	2,945	2,343	979	1,816	893	923	322	1,607	757	850	286
Oct	7,177	5,352	3,048	2,304	1,000	1,809	860	949	372	1,596	747	849	322
Nov	7,090	5,239	2,935	2,304	969	1,852	911	941	374	1,604	773	831	319
Dec	6,978	5,128	2,858	2,270	949	1,845	913	932	359	1,610	776	834	317

Note.—See footnote 5 and Note, Table B-32.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–36.—*Labor force participation rate and employment/population ratio, 1948–87*

[Percent; monthly data seasonally adjusted]

Year or month	Labor force participation rate								Employment/population ratio [3]							
	Total [1]	Civilian [2]							Total	Civilian						
		Total	Males	Females	Both sexes 16–19 years	White	Black and other	Black		Total	Males	Females	Both sexes 16–19 years	White	Black and other	Black
1948	....	58.8	86.6	32.7	52.5	....	....	....	....	56.6	83.5	31.3	47.7	....	....	
1949	....	58.9	86.4	33.1	52.2	....	....	....	....	55.4	81.3	31.2	45.2	....	....	
1950	59.7	59.2	86.4	33.9	51.8	....	....	....	56.6	56.1	82.0	32.0	45.5	....	....	....
1951	60.1	59.2	86.3	34.6	52.2	....	....	....	58.2	57.3	84.0	33.1	47.9	....	....	....
1952	60.0	59.0	86.3	34.7	51.3	....	....	....	58.2	57.3	83.9	33.4	46.9	....	....	....
1953	59.7	58.9	86.0	34.4	50.2	....	....	....	58.0	57.1	83.6	33.3	46.4	....	....	....
1954	59.6	58.8	85.5	34.6	48.3	58.2	64.0	....	56.4	55.5	81.0	32.5	42.3	55.2	58.0	....
1955	60.0	59.3	85.4	35.7	48.9	58.7	64.2	....	57.5	56.7	81.8	34.0	43.5	56.5	58.7	....
1956	60.7	60.0	85.5	36.9	50.9	59.4	64.9	....	58.2	57.5	82.3	35.1	45.3	57.3	59.5	....
1957	60.3	59.6	84.8	36.9	49.6	59.1	64.4	....	57.8	57.1	81.3	35.1	43.9	56.8	59.3	....
1958	60.1	59.5	84.2	37.1	47.4	58.9	64.8	....	56.1	55.4	78.5	34.5	39.9	55.3	56.7	....
1959	59.9	59.3	83.7	37.1	46.7	58.7	64.3	....	56.7	56.0	79.3	35.0	39.9	55.9	57.5	....
1960	60.0	59.4	83.3	37.7	47.5	58.8	64.5	....	56.8	56.1	78.9	35.5	40.5	55.9	57.9	....
1961	60.0	59.3	82.9	38.1	46.9	58.8	64.1	....	56.1	55.4	77.6	35.4	39.1	55.3	56.2	....
1962	59.5	58.8	82.0	37.9	46.1	58.3	63.2	....	56.3	55.5	77.7	35.6	39.4	55.4	56.3	....
1963	59.3	58.7	81.4	38.3	45.2	58.2	63.0	....	56.1	55.4	77.1	35.8	37.4	55.3	56.2	....
1964	59.4	58.7	81.0	38.7	44.5	58.2	63.1	....	56.4	55.7	77.3	36.3	37.3	55.5	57.0	....
1965	59.5	58.9	80.7	39.3	45.7	58.4	62.9	....	56.9	56.2	77.5	37.1	38.9	56.0	57.8	....
1966	59.8	59.2	80.4	40.3	48.2	58.7	63.0	....	57.6	56.9	77.9	38.3	42.1	56.8	58.4	....
1967	60.2	59.6	80.4	41.1	48.4	59.2	62.8	....	58.0	57.3	78.0	39.0	42.2	57.2	58.2	....
1968	60.3	59.6	80.1	41.6	48.3	59.3	62.2	....	58.2	57.5	77.8	39.6	42.2	57.4	58.0	....
1969	60.8	60.1	79.8	42.7	49.4	59.9	62.1	....	58.7	58.0	77.6	40.7	43.4	58.0	58.1	....
1970	61.0	60.4	79.7	43.3	49.9	60.2	61.8	....	58.0	57.4	76.2	40.8	42.3	57.5	56.8	....
1971	60.7	60.2	79.1	43.4	49.7	60.1	60.9	....	57.2	56.6	74.9	40.4	41.3	56.8	54.9	....
1972	60.9	60.4	78.9	43.9	51.9	60.4	60.2	59.9	57.5	57.0	75.0	41.0	43.5	57.4	54.1	53.7
1973	61.3	60.8	78.8	44.7	53.7	60.8	60.5	60.2	58.3	57.8	75.5	42.0	45.9	58.2	55.0	54.5
1974	61.7	61.3	78.7	45.7	54.8	61.4	60.3	59.8	58.3	57.8	74.9	42.6	46.0	58.3	54.3	53.5
1975	61.6	61.2	77.9	46.3	54.0	61.5	59.6	58.8	56.5	56.1	71.7	42.0	43.3	56.7	51.4	50.1
1976	62.0	61.6	77.5	47.3	54.5	61.8	59.8	59.0	57.3	56.8	72.0	43.2	44.2	57.5	52.0	50.8
1977	62.6	62.3	77.7	48.4	56.0	62.5	60.4	59.8	58.3	57.9	72.8	44.5	46.1	58.6	52.5	51.4
1978	63.5	63.2	77.9	50.0	57.8	63.3	62.2	61.5	59.7	59.3	73.8	46.4	48.3	60.0	54.7	53.6
1979	64.0	63.7	77.8	50.9	57.9	63.9	62.2	61.4	60.3	59.9	73.8	47.5	48.5	60.6	55.2	53.8
1980	64.1	63.8	77.4	51.5	56.7	64.1	61.7	61.0	59.6	59.2	72.0	47.7	46.6	60.0	53.6	52.3
1981	64.2	63.9	77.0	52.1	55.4	64.3	61.3	60.8	59.4	59.0	71.3	48.0	44.6	60.0	52.6	51.3
1982	64.3	64.0	76.6	52.6	54.1	64.3	61.6	61.0	58.2	57.8	69.0	47.7	41.5	58.8	50.9	49.4
1983	64.4	64.0	76.4	52.9	53.5	64.3	62.1	61.5	58.3	57.9	68.8	48.0	41.5	58.9	51.0	49.5
1984	64.7	64.4	76.4	53.6	53.9	64.6	62.6	62.2	59.9	59.5	70.7	49.5	43.7	60.5	53.6	52.3
1985	65.1	64.8	76.3	54.5	54.5	65.0	63.3	62.9	60.5	60.1	70.9	50.4	44.4	61.0	54.7	53.4
1986	65.6	65.3	76.3	55.3	54.7	65.5	63.7	63.3	61.1	60.7	71.0	51.4	44.6	61.5	55.4	54.1
1987	65.9	65.6	76.2	56.0	54.7	65.8	64.3	63.8	61.9	61.5	71.5	52.5	45.5	62.3	56.8	55.6
1986:																
Jan	65.3	65.0	76.3	54.8	53.4	65.2	63.7	63.2	61.0	60.6	71.3	51.0	43.7	61.5	55.4	54.0
Feb	65.4	65.0	76.2	54.9	54.5	65.3	63.5	63.0	60.7	60.4	70.9	50.8	44.3	61.2	55.2	53.8
Mar	65.4	65.1	76.3	55.0	54.9	65.3	64.0	63.6	60.8	60.5	70.9	51.0	44.9	61.3	55.5	54.2
Apr	65.5	65.1	76.2	55.1	55.5	65.3	64.0	63.8	60.9	60.5	70.9	51.0	44.8	61.3	55.3	54.4
May	65.5	65.2	76.2	55.2	55.1	65.3	64.0	63.9	60.8	60.5	70.8	51.2	44.8	61.3	55.4	54.6
June	65.8	65.4	76.4	55.5	55.4	65.7	64.2	63.8	61.1	60.8	71.0	51.5	44.9	61.6	55.4	54.2
July	65.7	65.4	76.3	55.5	54.6	65.6	63.6	63.0	61.1	60.8	70.9	51.6	44.7	61.6	55.4	54.0
Aug	65.7	65.3	76.2	55.6	54.9	65.6	63.2	62.5	61.2	60.9	71.0	51.7	44.9	61.8	54.9	53.3
Sept	65.7	65.4	76.3	55.5	54.9	65.6	63.7	63.2	61.2	60.8	70.9	51.6	44.7	61.7	55.3	53.8
Oct	65.7	65.4	76.1	55.6	54.9	65.6	63.8	63.4	61.2	60.8	70.8	51.8	45.3	61.7	55.6	54.2
Nov	65.8	65.4	76.4	55.5	54.4	65.7	63.7	63.2	61.3	60.9	71.1	51.7	44.6	61.8	55.6	54.2
Dec	65.6	65.3	76.3	55.4	53.4	65.6	63.5	63.1	61.3	61.0	71.1	51.7	44.1	61.8	55.7	54.4
1987:																
Jan	65.8	65.4	76.4	55.5	54.3	65.7	64.0	63.4	61.4	61.1	71.2	51.8	44.7	61.9	56.0	54.5
Feb	65.8	65.5	76.4	55.7	54.7	65.7	64.1	63.8	61.5	61.2	71.3	52.0	44.9	62.0	56.0	54.8
Mar	65.8	65.5	76.2	55.7	54.3	65.7	64.2	63.5	61.5	61.2	71.2	52.1	44.6	62.0	56.2	54.7
Apr	65.8	65.5	76.2	55.8	54.2	65.7	63.9	63.0	61.7	61.3	71.3	52.3	44.8	62.1	56.4	54.8
May	66.0	65.7	76.3	56.1	55.2	65.9	64.0	63.5	61.9	61.5	71.4	52.6	45.4	62.4	56.3	54.8
June	65.8	65.5	76.0	55.9	53.6	65.7	63.9	63.4	61.8	61.5	71.3	52.5	45.0	62.3	56.6	55.2
July	65.9	65.6	76.0	56.1	54.0	65.7	64.3	64.0	61.9	61.6	71.5	52.6	45.5	62.3	57.0	55.9
Aug	66.1	65.7	76.3	56.2	56.3	65.9	64.5	64.5	62.1	61.8	71.6	52.8	47.2	62.5	57.2	56.4
Sept	65.8	65.5	76.0	56.0	54.4	65.7	64.0	63.8	62.0	61.6	71.6	52.6	45.5	62.4	57.0	55.9
Oct	66.0	65.7	76.1	56.2	55.1	65.9	64.5	64.3	62.1	61.8	71.7	52.8	45.7	62.5	57.6	56.5
Nov	66.1	65.7	76.1	56.3	54.8	65.9	64.8	64.4	62.2	61.9	71.7	52.9	45.7	62.6	57.7	56.6
Dec	66.1	65.7	76.1	56.4	55.5	66.0	64.7	64.4	62.3	61.9	71.7	53.1	46.6	62.7	57.6	56.6

[1] Labor force including resident Armed Forces as percent of noninstitutional population including resident Armed Forces.
[2] Civilian labor force as percent of civilian noninstitutional population in group specified.
[3] Employment as percent of noninstitutional population in group specified.

Note.—Data relate to persons 16 years of age and over. See footnote 5 and Note, Table B–32.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B-37.—*Civilian labor force participation rate by demographic characteristic, 1954–87*

[Percent;[1] monthly data seasonally adjusted]

Year or month	All civilian workers	White							Black and other or black						
		Total	Males			Females			Total	Males			Females		
			Total	16–19 years	20 years and over	Total	16–19 years	20 years and over		Total	16–19 years	20 years and over	Total	16–19 years	20 years and over
									Black and other						
1954	58.8	58.2	85.6	57.6	87.8	33.3	40.6	32.7	64.0	85.2	61.2	87.1	46.1	31.0	47.7
1955	59.3	58.7	85.4	58.6	87.5	34.5	40.7	34.0	64.2	85.1	60.8	87.8	46.1	32.7	47.5
1956	60.0	59.4	85.6	60.4	87.6	35.7	43.1	35.1	64.9	85.1	61.5	87.8	47.3	36.3	48.4
1957	59.6	59.1	84.8	59.2	86.9	35.7	42.2	35.2	64.4	84.2	58.8	87.0	47.1	33.2	48.6
1958	59.5	58.9	84.3	56.5	86.6	35.8	40.1	35.5	64.8	84.1	57.3	87.1	48.0	31.9	49.8
1959	59.3	58.7	83.8	55.9	86.3	36.0	39.6	35.6	64.3	83.4	55.5	86.7	47.7	28.2	49.8
1960	59.4	58.8	83.4	55.9	86.0	36.5	40.3	36.2	64.5	83.0	57.6	86.2	48.2	32.9	49.9
1961	59.3	58.8	83.0	54.5	85.7	36.9	40.6	36.6	64.1	82.2	55.8	85.5	48.3	32.8	50.1
1962	58.8	58.3	82.1	53.8	84.9	36.7	39.8	36.5	63.2	80.8	53.5	84.2	48.0	33.1	49.6
1963	58.7	58.2	81.5	53.1	84.4	37.2	38.7	37.0	63.0	80.2	51.5	83.9	48.1	32.6	49.9
1964	58.7	58.2	81.1	52.7	84.2	37.5	37.8	37.5	63.1	80.1	49.9	84.1	48.6	31.7	50.7
1965	58.9	58.4	80.8	54.1	83.9	38.1	39.2	38.0	62.9	79.6	51.3	83.7	48.6	29.5	51.1
1966	59.2	58.7	80.6	55.9	83.6	39.2	42.6	38.8	63.0	79.0	51.4	83.3	49.4	33.5	51.6
1967	59.6	59.2	80.6	56.3	83.5	40.1	42.5	39.8	62.8	78.5	51.1	82.9	49.5	35.2	51.6
1968	59.6	59.3	80.4	55.9	83.2	40.7	43.0	40.4	62.2	77.7	49.7	82.2	49.3	34.8	51.4
1969	60.1	59.9	80.2	56.8	83.0	41.8	44.6	41.5	62.1	76.9	49.6	81.4	49.8	34.6	52.0
1970	60.4	60.2	80.0	57.5	82.8	42.6	45.6	42.2	61.8	76.5	47.4	81.4	49.5	34.1	51.8
1971	60.2	60.1	79.6	57.9	82.3	42.6	45.4	42.3	60.9	74.9	44.7	80.0	49.2	31.2	51.8
1972	60.4	60.4	79.6	60.1	82.0	43.2	48.1	42.7	60.2	73.9	46.0	78.6	48.8	32.3	51.2
									Black						
1972	60.4	60.4	79.6	60.1	82.0	43.2	48.1	42.7	59.9	73.6	46.3	78.5	48.7	32.2	51.2
1973	60.8	60.8	79.4	62.0	81.6	44.1	50.1	43.5	60.2	73.4	45.7	78.4	49.3	34.2	51.6
1974	61.3	61.4	79.4	62.9	81.4	45.2	51.7	44.4	59.8	72.9	46.7	77.6	49.0	33.4	51.4
1975	61.2	61.5	78.7	61.9	80.7	45.9	51.5	45.3	58.8	70.9	42.6	76.0	48.8	34.2	51.1
1976	61.6	61.8	78.4	62.3	80.3	46.9	52.8	46.2	59.0	70.0	41.3	75.4	49.8	32.9	52.5
1977	62.3	62.5	78.5	64.0	80.2	48.0	54.5	47.3	59.8	70.6	43.2	75.6	50.8	32.9	53.6
1978	63.2	63.3	78.6	65.0	80.1	49.4	56.7	48.7	61.5	71.5	44.9	76.2	53.1	37.3	55.5
1979	63.7	63.9	78.6	64.8	80.1	50.5	57.4	49.8	61.4	71.3	43.6	76.3	53.1	36.8	55.4
1980	63.8	64.1	78.2	63.7	79.8	51.2	56.2	50.6	61.0	70.3	43.2	75.1	53.1	34.9	55.6
1981	63.9	64.3	77.9	62.4	79.5	51.9	55.4	51.5	60.8	70.0	41.6	74.5	53.5	34.0	56.0
1982	64.0	64.3	77.4	60.0	79.2	52.4	55.0	52.2	61.0	70.1	39.8	74.7	53.7	33.5	56.2
1983	64.0	64.3	77.1	59.4	78.9	52.7	54.5	52.5	61.5	70.6	39.9	75.2	54.2	33.0	56.8
1984	64.4	64.6	77.1	59.0	78.7	53.3	55.4	53.1	62.2	70.8	41.7	74.8	55.2	35.0	57.6
1985	64.8	65.0	77.0	59.7	78.5	54.1	55.2	54.0	62.9	70.8	44.6	74.4	56.5	37.9	58.6
1986	65.3	65.5	76.9	59.3	78.5	55.0	56.3	54.9	63.3	71.2	43.7	74.8	56.9	39.1	58.9
1987	65.6	65.8	76.8	59.0	78.4	55.7	56.5	55.6	63.8	71.1	43.6	74.7	58.0	39.6	60.0
1986: Jan	65.0	65.2	76.9	57.6	78.6	54.5	55.4	54.4	63.2	71.5	43.7	75.2	56.5	39.6	58.4
Feb	65.0	65.3	76.9	59.1	78.5	54.6	56.8	54.4	63.0	71.1	45.4	74.6	56.5	38.6	58.4
Mar	65.1	65.3	76.9	58.4	78.5	54.7	57.0	54.5	63.6	71.7	45.8	75.1	57.0	41.9	58.7
Apr	65.1	65.3	76.9	59.6	78.4	54.7	56.7	54.5	63.8	71.6	45.8	75.0	57.6	42.2	59.3
May	65.2	65.3	76.8	59.6	78.3	54.8	56.2	54.7	63.9	72.0	48.5	75.2	57.3	38.5	59.4
June	65.4	65.7	77.0	60.0	78.5	55.2	56.4	55.1	63.8	71.7	44.4	75.3	57.4	42.6	59.0
July	65.4	65.6	76.9	59.3	78.4	55.3	55.4	55.3	63.0	71.1	43.4	74.8	56.4	36.2	58.6
Aug	65.3	65.6	76.8	59.8	78.3	55.3	56.0	55.3	62.5	70.0	40.3	74.0	56.4	36.0	58.6
Sept	65.4	65.6	77.0	60.4	78.5	55.2	55.8	55.2	63.2	70.9	42.7	74.6	56.9	39.5	58.8
Oct	65.4	65.6	76.9	59.8	78.4	55.3	56.9	55.2	63.4	71.1	42.4	74.9	57.1	39.2	59.0
Nov	65.4	65.7	77.1	60.0	78.6	55.2	56.3	55.1	63.2	70.6	39.8	74.7	57.3	38.2	59.3
Dec	65.3	65.6	77.1	57.7	78.8	55.1	56.3	55.0	63.1	70.8	41.7	74.6	56.8	37.6	58.9
1987: Jan	65.4	65.7	77.0	59.3	78.6	55.2	56.3	55.2	63.4	71.3	43.7	74.9	57.1	35.7	59.4
Feb	65.5	65.7	77.1	60.3	78.5	55.3	55.9	55.3	63.8	71.2	43.0	74.9	57.8	40.2	59.7
Mar	65.5	65.7	76.9	59.0	78.4	55.4	56.0	55.4	63.5	70.9	41.5	74.8	57.5	38.7	59.5
Apr	65.5	65.7	76.8	58.5	78.4	55.5	56.5	55.5	63.0	70.7	42.1	74.4	56.8	37.2	58.9
May	65.7	65.9	77.0	59.3	78.5	55.8	57.8	55.7	63.5	71.1	41.7	75.0	57.2	38.4	59.3
June	65.5	65.7	76.8	57.6	78.4	55.6	55.8	55.6	63.4	70.5	40.3	74.5	57.6	38.8	59.6
July	65.6	65.7	76.6	57.1	78.3	55.7	56.7	55.7	64.0	71.2	42.2	75.1	58.1	37.4	60.4
Aug	65.7	65.9	76.8	59.9	78.2	55.9	57.1	55.8	64.5	71.8	48.4	74.9	58.5	41.5	60.3
Sept	65.5	65.7	76.7	58.6	78.2	55.7	55.7	55.7	63.8	70.9	43.3	74.5	58.0	42.3	59.7
Oct	65.7	65.9	76.9	59.3	78.4	55.8	56.5	55.7	64.3	70.9	44.5	74.3	59.0	43.1	60.7
Nov	65.7	65.9	76.8	58.7	78.3	55.9	56.7	55.8	64.4	71.1	45.8	74.5	58.9	40.8	60.9
Dec	65.7	66.0	76.8	60.1	78.2	56.0	57.0	55.9	64.4	71.0	45.6	74.3	59.1	41.8	61.0

[1] Civilian labor force as percent of civilian noninstitutional population in group specified.

Note.—Data relate to persons 16 years of age and over. See footnote 5 and Note, Table B-32.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B-38.—*Civilian employment/population ratio by demographic characteristic, 1954–87*

[Percent [1]; monthly data seasonally adjusted]

Year or month	All civilian workers	White							Black and other or black						
		Total	Males			Females			Total	Males			Females		
			Total	16–19 years	20 years and over	Total	16–19 years	20 years and over		Total	16–19 years	20 years and over	Total	16–19 years	20 years and over
									Black and other						
1954	55.5	55.2	81.5	49.9	84.0	31.4	36.4	31.1	58.0	76.5	52.4	79.2	41.9	24.7	43.7
1955	56.7	56.5	82.2	52.0	84.7	33.0	37.0	32.7	58.7	77.6	52.7	80.4	42.2	26.4	43.9
1956	57.5	57.3	82.7	54.1	85.0	34.2	38.9	33.8	59.5	78.4	52.2	81.3	43.0	28.0	44.7
1957	57.1	56.8	81.8	52.4	84.1	34.2	38.2	33.9	59.3	77.2	48.0	80.5	43.7	26.5	45.5
1958	55.4	55.3	79.2	47.6	81.8	33.6	35.0	33.5	56.7	72.5	42.0	76.0	42.8	22.8	45.0
1959	56.0	55.9	79.9	48.1	82.8	34.0	34.8	34.0	57.5	73.8	41.4	77.6	43.2	20.3	45.7
1960	56.1	55.9	79.4	48.1	82.4	34.6	35.1	34.5	57.9	74.1	43.8	77.9	43.6	24.8	45.8
1961	55.4	55.3	78.2	45.9	81.4	34.5	34.6	34.5	56.2	71.7	41.0	75.5	42.6	23.2	44.8
1962	55.5	55.4	78.4	46.4	81.5	34.7	34.8	34.7	56.3	72.0	41.7	75.7	42.7	23.1	44.9
1963	55.4	55.3	77.7	44.7	81.1	35.0	32.9	35.2	56.2	71.8	37.4	76.2	42.7	21.3	45.2
1964	55.7	55.5	77.8	45.0	81.3	35.5	32.2	35.8	57.0	72.9	37.8	77.7	43.4	21.8	46.1
1965	56.2	56.0	77.9	47.1	81.5	36.2	33.7	36.5	57.8	73.7	39.4	78.7	44.1	20.2	47.3
1966	56.9	56.8	78.3	50.1	81.7	37.5	37.5	37.5	58.4	74.0	40.5	79.2	45.1	23.1	49.2
1967	57.3	57.2	78.4	50.2	81.7	38.3	37.7	38.3	58.2	73.8	38.8	79.4	45.0	24.8	47.9
1968	57.5	57.4	78.3	50.3	81.6	38.9	37.8	39.1	58.0	73.3	38.7	78.9	45.2	24.7	48.2
1969	58.0	58.0	78.2	51.1	81.4	40.1	39.5	40.1	58.1	72.8	39.0	78.4	45.9	25.1	48.9
1970	57.4	57.5	76.8	49.6	80.1	40.3	39.5	40.4	56.8	70.9	35.5	76.8	44.9	22.4	48.2
1971	56.6	56.8	75.7	49.2	79.0	39.9	38.6	40.1	54.9	68.1	31.8	74.2	43.9	20.2	47.3
1972	57.0	57.4	76.0	51.5	79.0	40.7	41.3	40.6	54.1	67.3	32.4	73.2	43.3	19.9	46.7
									Black						
1972	57.0	57.4	76.0	51.5	79.0	40.7	41.3	40.6	53.7	66.8	31.6	73.0	43.0	19.2	46.5
1973	57.8	58.2	76.5	54.3	79.2	41.8	43.6	41.6	54.5	67.5	32.8	73.7	43.8	22.0	47.2
1974	57.8	58.3	75.9	54.4	78.6	42.4	44.3	42.2	53.5	65.8	31.4	71.9	43.5	20.9	46.9
1975	56.1	56.7	73.0	50.6	75.7	42.0	42.5	41.9	50.1	60.6	26.3	66.5	41.6	20.2	44.9
1976	56.8	57.5	73.4	51.5	76.0	43.2	44.2	43.1	50.8	60.6	25.8	66.8	42.8	19.2	46.4
1977	57.9	58.6	74.1	54.4	76.5	44.5	45.9	44.4	51.4	61.4	26.4	67.5	43.3	18.5	47.0
1978	59.3	60.0	75.0	56.3	77.2	46.3	48.5	46.1	53.6	63.3	28.5	69.1	45.8	22.1	49.3
1979	59.9	60.6	75.1	55.7	77.3	47.5	49.4	47.3	53.8	63.4	28.7	69.1	46.0	22.4	49.3
1980	59.2	60.0	73.4	53.4	75.6	47.8	47.9	47.8	52.3	60.4	27.0	65.8	45.7	21.0	49.1
1981	59.0	60.0	72.8	51.3	75.1	48.3	46.2	48.5	51.3	59.1	24.6	64.5	45.1	19.7	48.5
1982	57.8	58.8	70.6	47.0	73.0	48.1	44.6	48.4	49.4	56.0	20.3	61.4	44.2	17.7	47.5
1983	57.9	58.9	70.4	47.4	72.6	48.5	44.5	48.9	49.5	56.3	20.4	61.6	44.1	17.0	47.4
1984	59.5	60.5	72.1	49.1	74.3	49.8	47.0	50.0	52.3	59.2	23.9	64.1	46.7	20.1	49.8
1985	60.1	61.0	72.3	49.9	74.3	50.7	47.1	51.0	53.4	60.0	26.3	64.6	48.1	23.1	50.9
1986	60.7	61.5	72.3	49.6	74.3	51.7	47.9	52.0	54.1	60.6	26.5	65.1	48.8	23.8	51.6
1987	61.5	62.3	72.7	49.9	74.7	52.8	49.0	53.1	55.6	62.0	28.5	66.4	50.3	25.8	53.0
1986: Jan	60.6	61.5	72.6	48.9	74.7	51.2	46.9	51.6	54.0	60.8	25.6	65.5	48.5	23.2	51.4
Feb	60.4	61.2	72.3	49.3	74.3	51.0	48.1	51.3	53.8	60.4	27.7	64.8	48.5	23.5	51.2
Mar	60.5	61.3	72.2	49.3	74.2	51.3	49.1	51.5	54.2	60.9	26.4	65.5	48.9	24.5	51.5
Apr	60.5	61.3	72.2	49.6	74.2	51.3	47.8	51.5	54.4	60.9	27.4	65.3	49.1	24.3	51.8
May	60.5	61.3	72.0	49.6	73.9	51.4	47.9	51.7	54.6	61.4	29.6	65.6	49.0	23.2	51.8
June	60.8	61.6	72.3	49.6	74.3	51.8	48.1	52.1	54.2	60.8	26.8	65.4	48.8	25.6	51.4
July	60.8	61.6	72.2	49.8	74.2	52.0	47.2	52.3	54.0	60.6	25.6	65.2	48.7	23.0	51.5
Aug	60.9	61.8	72.4	49.9	74.3	52.1	47.9	52.4	53.3	59.5	24.0	64.2	48.2	20.3	51.3
Sept	60.8	61.7	72.3	50.3	74.2	51.9	47.4	52.3	53.8	60.0	26.0	64.5	48.9	23.7	51.6
Oct	60.8	61.7	72.2	50.4	74.1	52.1	48.5	52.3	54.2	60.3	26.1	64.9	49.2	26.2	51.7
Nov	60.9	61.8	72.4	50.2	74.4	52.0	47.6	52.3	54.2	60.4	25.7	65.1	49.1	24.2	51.8
Dec	61.0	61.8	72.5	48.6	74.6	52.0	48.2	52.4	54.4	61.2	26.6	65.8	48.9	23.7	51.6
1987: Jan	61.1	61.9	72.5	49.7	74.5	52.1	48.4	52.4	54.5	61.4	27.7	65.8	48.9	20.6	51.9
Feb	61.2	62.0	72.6	50.7	74.5	52.3	48.0	52.6	54.8	61.4	26.7	66.0	49.5	24.9	52.2
Mar	61.2	62.0	72.4	49.1	74.5	52.4	48.3	52.7	54.7	61.4	26.5	66.1	49.2	24.0	51.9
Apr	61.3	62.1	72.5	48.9	74.5	52.6	49.0	52.9	54.8	61.6	26.2	66.3	49.3	23.7	52.1
May	61.5	62.4	72.7	49.2	74.7	52.9	50.1	53.1	54.8	61.1	25.8	65.8	49.6	24.3	52.4
June	61.5	62.3	72.6	49.1	74.6	52.8	48.6	53.1	55.2	61.5	27.7	66.0	50.1	25.0	52.9
July	61.6	62.3	72.6	49.4	74.7	52.9	49.3	53.2	55.9	62.2	28.6	66.7	50.7	25.0	53.5
Aug	61.8	62.5	72.8	50.8	74.7	53.0	49.8	53.3	56.4	62.9	32.1	66.9	51.2	30.2	53.5
Sept	61.6	62.4	72.7	49.8	74.7	52.8	48.2	53.2	55.9	62.6	29.6	67.0	50.5	29.6	52.7
Oct	61.8	62.5	72.8	50.3	74.8	53.0	48.7	53.3	56.5	62.7	30.1	67.0	51.5	27.9	54.0
Nov	61.9	62.6	72.9	50.0	74.9	53.1	49.2	53.4	56.6	62.7	31.1	66.9	51.6	26.2	54.3
Dec	61.9	62.7	73.0	51.1	74.9	53.2	50.0	53.5	56.6	62.5	30.4	66.8	51.7	27.9	54.3

[1] Civilian employment as percent of civilian noninstitutional population in group specified.

Note.—Data relate to persons 16 years of age and over. See footnote 5 and Note, Table B-32.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B-39.—*Unemployment rate, 1948–87*

[Percent; monthly data seasonally adjusted]

Year or month	Unemployment rate, all workers [1]	Unemployment rate, civilian workers [2]												Experienced wage and salary workers	Married men, spouse present [3]	Women who maintain families
		All civilian workers	Males			Females			Both sexes 16–19 years	White	Black and other	Black			
			Total	16–19 years	20 years and over	Total	16–19 years	20 years and over							
1948	....	3.8	3.6	9.8	3.2	4.1	8.3	3.6	9.2	3.5	5.9	....	4.3	....	....
1949	....	5.9	5.9	14.3	5.4	6.0	12.3	5.3	13.4	5.6	8.9	....	6.8	3.5	....
1950	5.2	5.3	5.1	12.7	4.7	5.7	11.4	5.1	12.2	4.9	9.0	....	6.0	4.6	....
1951	3.2	3.3	2.8	8.1	2.5	4.4	8.3	4.0	8.2	3.1	5.3	....	3.7	1.5	....
1952	2.9	3.0	2.8	8.9	2.4	3.6	8.0	3.2	8.5	2.8	5.4	....	3.4	1.4	....
1953	2.8	2.9	2.8	7.9	2.5	3.3	7.2	2.9	7.6	2.7	4.5	....	3.2	1.7	....
1954	5.4	5.5	5.3	13.5	4.9	6.0	11.4	5.5	12.6	5.0	9.9	....	6.2	4.0	....
1955	4.3	4.4	4.2	11.6	3.8	4.9	10.2	4.4	11.0	3.9	8.7	....	4.8	2.6	....
1956	4.0	4.1	3.8	11.1	3.4	4.8	11.2	4.2	11.1	3.6	8.3	....	4.4	2.3	....
1957	4.2	4.3	4.1	12.4	3.6	4.7	10.6	4.1	11.6	3.8	7.9	....	4.6	2.8	....
1958	6.6	6.8	6.8	17.1	6.2	6.8	14.3	6.1	15.9	6.1	12.6	....	7.3	5.1	....
1959	5.3	5.5	5.2	15.3	4.7	5.9	13.5	5.2	14.6	4.8	10.7	....	5.7	3.6	....
1960	5.4	5.5	5.4	15.3	4.7	5.9	13.9	5.1	14.7	5.0	10.2	....	5.7	3.7	....
1961	6.5	6.7	6.4	17.1	5.7	7.2	16.3	6.3	16.8	6.0	12.4	....	6.8	4.6	....
1962	5.4	5.5	5.2	14.7	4.6	6.2	14.6	5.4	14.7	4.9	10.9	....	5.6	3.6	....
1963	5.5	5.7	5.2	17.2	4.5	6.5	17.2	5.4	17.2	5.0	10.8	....	5.6	3.4	....
1964	5.0	5.2	4.6	15.8	3.9	6.2	16.6	5.2	16.2	4.6	9.6	....	5.0	2.8	....
1965	4.4	4.5	4.0	14.1	3.2	5.5	15.7	4.5	14.8	4.1	8.1	....	4.3	2.4	....
1966	3.7	3.8	3.2	11.7	2.5	4.8	14.1	3.8	12.8	3.4	7.3	....	3.5	1.9	....
1967	3.7	3.8	3.1	12.3	2.3	5.2	13.5	4.2	12.9	3.4	7.4	....	3.6	1.8	4.9
1968	3.5	3.6	2.9	11.6	2.2	4.8	14.0	3.8	12.7	3.2	6.7	....	3.4	1.6	4.4
1969	3.4	3.5	2.8	11.4	2.1	4.7	13.3	3.7	12.2	3.1	6.4	....	3.3	1.5	4.4
1970	4.8	4.9	4.4	15.0	3.5	5.9	15.6	4.8	15.3	4.5	8.2	....	4.8	2.6	5.4
1971	5.8	5.9	5.3	16.6	4.4	6.9	17.2	5.7	16.9	5.4	9.9	....	5.7	3.2	7.3
1972	5.5	5.6	5.0	15.9	4.0	6.6	16.7	5.4	16.2	5.1	10.0	10.4	5.3	2.8	7.2
1973	4.8	4.9	4.2	13.9	3.3	6.0	15.3	4.9	14.5	4.3	9.0	9.4	4.5	2.3	7.1
1974	5.5	5.6	4.9	15.6	3.8	6.7	16.6	5.5	16.0	5.0	9.9	10.5	5.3	2.7	7.0
1975	8.3	8.5	7.9	20.1	6.8	9.3	19.7	8.0	19.9	7.8	13.8	14.8	8.2	5.1	10.0
1976	7.6	7.7	7.1	19.2	5.9	8.6	18.7	7.4	19.0	7.0	13.1	14.0	7.3	4.2	10.1
1977	6.9	7.1	6.3	17.3	5.2	8.2	18.3	7.0	17.8	6.2	13.1	14.0	6.6	3.6	9.4
1978	6.0	6.1	5.3	15.8	4.3	7.2	17.1	6.0	16.4	5.2	11.9	12.8	5.6	2.8	8.5
1979	5.8	5.8	5.1	15.9	4.2	6.8	16.4	5.7	16.1	5.1	11.3	12.3	5.5	2.8	8.3
1980	7.0	7.1	6.9	18.3	5.9	7.4	17.2	6.4	17.8	6.3	13.1	14.3	6.9	4.2	9.2
1981	7.5	7.6	7.4	20.1	6.3	7.9	19.0	6.8	19.6	6.7	14.2	15.6	7.3	4.3	10.4
1982	9.5	9.7	9.9	24.4	8.8	9.4	21.9	8.3	23.2	8.6	17.3	18.9	9.3	6.5	11.7
1983	9.5	9.6	9.9	23.3	8.9	9.2	21.3	8.1	22.4	8.4	17.8	19.5	9.2	6.5	12.2
1984	7.4	7.5	7.4	19.6	6.6	7.6	18.0	6.8	18.9	6.5	14.4	15.9	7.1	4.6	10.3
1985	7.1	7.2	7.0	19.5	6.2	7.4	17.6	6.6	18.6	6.2	13.7	15.1	6.8	4.3	10.4
1986	6.9	7.0	6.9	19.0	6.1	7.1	17.6	6.2	18.3	6.0	13.1	14.5	6.6	4.4	9.8
1987	6.1	6.2	6.2	17.8	5.4	6.2	15.9	5.4	16.9	5.3	11.6	13.0	5.8	3.9	9.2
1986: Jan	6.6	6.7	6.5	18.3	5.8	7.0	18.1	6.1	18.2	5.7	13.0	14.5	6.3	4.3	10.0
Feb	7.1	7.2	7.0	19.4	6.2	7.5	18.1	6.6	18.8	6.3	13.1	14.6	6.7	4.4	9.9
Mar	7.0	7.1	7.0	18.9	6.2	7.3	17.3	6.5	18.1	6.1	13.3	14.7	6.7	4.5	10.0
Apr	7.0	7.1	7.0	19.7	6.1	7.4	18.8	6.4	19.2	6.1	13.6	14.8	6.7	4.2	9.6
May	7.1	7.2	7.1	19.7	6.3	7.3	17.6	6.4	18.7	6.2	13.4	14.6	6.8	4.5	10.0
June	7.0	7.1	7.0	19.7	6.2	7.3	18.1	6.4	18.9	6.2	13.6	15.0	6.6	4.5	9.8
July	6.9	7.0	7.0	18.9	6.2	7.0	17.2	6.2	18.1	6.1	12.8	14.3	6.6	4.4	9.5
Aug	6.8	6.9	6.8	19.1	6.0	6.9	17.2	6.1	18.2	5.9	13.2	14.8	6.5	4.2	10.1
Sept	6.9	7.0	7.1	19.3	6.2	7.0	17.8	6.1	18.5	6.0	13.3	14.7	6.5	4.3	9.8
Oct	6.8	6.9	7.0	18.3	6.2	6.9	16.9	6.1	17.6	6.0	12.8	14.5	6.6	4.5	8.8
Nov	6.8	6.9	6.9	18.5	6.2	6.9	17.7	6.1	18.1	6.0	12.8	14.3	6.5	4.4	9.8
Dec	6.6	6.7	6.8	18.2	6.0	6.6	16.9	5.8	17.5	5.8	12.3	13.7	6.3	4.3	10.0
1987: Jan	6.6	6.7	6.7	18.5	6.0	6.6	16.8	5.9	17.7	5.8	12.5	14.1	6.3	4.2	9.8
Feb	6.5	6.6	6.6	18.5	5.8	6.6	17.1	5.8	17.9	5.7	12.6	14.0	6.2	4.1	9.6
Mar	6.4	6.5	6.6	19.0	5.7	6.5	16.6	5.7	17.8	5.6	12.4	13.9	6.1	4.1	9.7
Apr	6.2	6.3	6.4	18.7	5.6	6.3	15.9	5.5	17.3	5.5	11.8	13.0	5.9	4.1	9.4
May	6.2	6.3	6.4	19.6	5.6	6.2	15.6	5.4	17.6	5.4	12.1	13.7	5.9	4.0	9.5
June	6.0	6.1	6.2	16.4	5.5	6.0	15.5	5.3	16.0	5.3	11.5	12.8	5.8	4.0	9.5
July	6.0	6.0	6.0	15.9	5.4	6.1	15.7	5.4	15.8	5.2	11.4	12.7	5.8	3.8	9.3
Aug	5.9	6.0	6.1	17.8	5.2	6.0	14.4	5.3	16.2	5.2	11.3	12.4	5.7	3.7	9.0
Sept	5.8	5.9	5.8	17.3	5.0	6.1	15.4	5.4	16.4	5.1	10.9	12.3	5.5	3.7	8.8
Oct	5.9	6.0	5.9	17.4	5.1	6.1	16.9	5.2	17.2	5.2	10.8	12.1	5.5	3.7	8.9
Nov	5.8	5.9	5.8	17.2	5.0	6.0	16.0	5.2	16.6	5.1	11.0	12.2	5.5	3.5	8.5
Dec	5.7	5.8	5.7	17.2	4.9	5.9	14.8	5.2	16.1	4.9	10.9	12.2	5.4	3.4	8.4

---

[1] Unemployed as percent of labor force including resident Armed Forces.
[2] Unemployed as percent of civilian labor force in group specified.
[3] Data for 1949 and 1951–54 are for April; 1950, for March.

Note.—Data relate to persons 16 years of age and over. See footnote 5 and Note, Table B-32.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–40.—*Civilian unemployment rate by demographic characteristic, 1948–87*

[Percent;[1] monthly data seasonally adjusted]

Year or month	All civilian workers	White							Black and other or black						
		Total	Males			Females			Total	Males			Females		
			Total	16–19 years	20 years and over	Total	16–19 years	20 years and over		Total	16–19 years	20 years and over	Total	16–19 years	20 years and over
									Black and other						
1948	3.8	3.5	3.4	......	......	3.8	......	......	5.9	5.8	......	......	6.1	......	......
1949	5.9	5.6	5.6	......	......	5.7	......	......	8.9	9.6	......	......	7.9	......	......
1950	5.3	4.9	4.7	......	......	5.3	......	......	9.0	9.4	......	......	8.4	......	......
1951	3.3	3.1	2.6	......	......	4.2	......	......	5.3	4.9	......	......	6.1	......	......
1952	3.0	2.8	2.5	......	......	3.3	......	......	5.4	5.2	......	......	5.7	......	......
1953	2.9	2.7	2.5	......	......	3.1	......	......	4.5	4.8	......	......	4.1	......	......
1954	5.5	5.0	4.8	13.4	4.4	5.5	10.4	5.1	9.9	10.3	14.4	9.9	9.2	20.6	8.4
1955	4.4	3.9	3.7	11.3	3.3	4.3	9.1	3.9	8.7	8.8	13.4	8.4	8.5	19.2	7.7
1956	4.1	3.6	3.4	10.5	3.0	4.2	9.7	3.7	8.3	7.9	15.0	7.4	8.9	22.8	7.8
1957	4.3	3.8	3.6	11.5	3.2	4.3	9.5	3.8	7.9	8.3	18.4	7.6	7.3	20.2	6.4
1958	6.8	6.1	6.1	15.7	5.5	6.2	12.7	5.6	12.6	13.7	26.8	12.7	10.8	28.4	9.5
1959	5.5	4.8	4.6	14.0	4.1	5.3	12.0	4.7	10.7	11.5	25.2	10.5	9.4	27.7	8.3
1960	5.5	5.0	4.8	14.0	4.2	5.3	12.7	4.6	10.2	10.7	24.0	9.6	9.4	24.8	8.3
1961	6.7	6.0	5.7	15.7	5.1	6.5	14.8	5.7	12.4	12.8	26.8	11.7	11.9	29.2	10.6
1962	5.5	4.9	4.6	13.7	4.0	5.5	12.8	4.7	10.9	10.9	22.0	10.0	11.0	30.2	9.6
1963	5.7	5.0	4.7	15.9	3.9	5.8	15.1	4.8	10.8	10.5	27.3	9.2	11.2	34.7	9.4
1964	5.2	4.6	4.1	14.7	3.4	5.5	14.9	4.6	9.6	8.9	24.3	7.7	10.7	31.6	9.0
1965	4.5	4.1	3.6	12.9	2.9	5.0	14.0	4.0	8.1	7.4	23.3	6.0	9.2	31.7	7.5
1966	3.8	3.4	2.8	10.5	2.2	4.3	12.1	3.3	7.3	6.3	21.3	4.9	8.7	31.3	6.6
1967	3.8	3.4	2.7	10.7	2.1	4.6	11.5	3.8	7.4	6.0	23.9	4.3	9.1	29.6	7.1
1968	3.6	3.2	2.6	10.1	2.0	4.3	12.1	3.4	6.7	5.6	22.1	3.9	8.3	28.7	6.3
1969	3.5	3.1	2.5	10.0	1.9	4.2	11.5	3.4	6.4	5.3	21.4	3.7	7.8	27.6	5.8
1970	4.9	4.5	4.0	13.7	3.2	5.4	13.4	4.4	8.2	7.3	25.0	5.6	9.3	34.5	6.9
1971	5.9	5.4	4.9	15.1	4.0	6.3	15.1	5.3	9.9	9.1	28.8	7.3	10.9	35.4	8.7
1972	5.6	5.1	4.5	14.2	3.6	5.9	14.2	4.9	10.0	8.9	29.7	6.9	11.4	38.4	8.8
									Black						
1972	5.6	5.1	4.5	14.2	3.6	5.9	14.2	4.9	10.4	9.3	31.7	7.0	11.8	40.5	9.0
1973	4.9	4.3	3.8	12.3	3.0	5.3	13.0	4.3	9.4	8.0	27.8	6.0	11.1	36.1	8.6
1974	5.6	5.0	4.4	13.5	3.5	6.1	14.5	5.1	10.5	9.8	33.1	7.4	11.3	37.4	8.8
1975	8.5	7.8	7.2	18.3	6.2	8.6	17.4	7.5	14.8	14.8	38.1	12.5	14.8	41.0	12.2
1976	7.7	7.0	6.4	17.3	5.4	7.9	16.4	6.8	14.0	13.7	37.5	11.4	14.3	41.6	11.7
1977	7.1	6.2	5.5	15.0	4.7	7.3	15.9	6.2	14.0	13.3	39.2	10.7	14.9	43.4	12.3
1978	6.1	5.2	4.6	13.5	3.7	6.2	14.4	5.2	12.8	11.8	36.7	9.3	13.8	40.8	11.2
1979	5.8	5.1	4.5	13.9	3.6	5.9	14.0	5.0	12.3	11.4	34.2	9.3	13.3	39.1	10.9
1980	7.1	6.3	6.1	16.2	5.3	6.5	14.8	5.6	14.3	14.5	37.5	12.4	14.0	39.8	11.9
1981	7.6	6.7	6.5	17.9	5.6	6.9	16.6	5.9	15.6	15.7	40.7	13.5	15.6	42.2	13.4
1982	9.7	8.6	8.8	21.7	7.8	8.3	19.0	7.3	18.9	20.1	48.9	17.8	17.6	47.1	15.4
1983	9.6	8.4	8.8	20.2	7.9	7.9	18.3	6.9	19.5	20.3	48.8	18.1	18.6	48.2	16.5
1984	7.5	6.5	6.4	16.8	5.7	6.5	15.2	5.8	15.9	16.4	42.7	14.3	15.4	42.6	13.5
1985	7.2	6.2	6.1	16.5	5.4	6.4	14.8	5.7	15.1	15.3	41.0	13.2	14.9	39.2	13.1
1986	7.0	6.0	6.0	16.3	5.3	6.1	14.9	5.4	14.5	14.8	39.3	12.9	14.2	39.2	12.4
1987	6.2	5.3	5.4	15.5	4.8	5.2	13.4	4.6	13.0	12.7	34.4	11.1	13.2	34.9	11.6
1986: Jan	6.7	5.7	5.5	15.1	4.9	6.0	15.2	5.3	14.5	14.9	41.3	12.9	14.1	41.4	12.1
Feb	7.2	6.3	6.0	16.5	5.4	6.6	15.4	5.9	14.6	15.1	39.1	13.1	14.1	39.2	12.3
Mar	7.1	6.1	6.0	15.6	5.4	6.3	13.9	5.6	14.7	15.1	42.5	12.8	14.3	41.4	12.2
Apr	7.1	6.1	6.0	16.8	5.3	6.3	15.6	5.5	14.8	14.9	40.2	12.9	14.8	42.5	12.7
May	7.2	6.2	6.2	16.8	5.5	6.2	14.8	5.5	14.6	14.7	39.0	12.7	14.5	39.7	12.7
June	7.1	6.2	6.1	17.3	5.4	6.2	14.8	5.5	15.0	15.1	39.6	13.2	14.9	39.8	12.9
July	7.0	6.1	6.1	16.0	5.4	6.0	14.8	5.4	14.3	14.9	41.0	12.8	13.7	36.5	12.1
Aug	6.9	5.9	5.8	16.5	5.1	5.9	14.5	5.2	14.8	15.0	40.4	13.2	14.5	43.7	12.5
Sept	7.0	6.0	6.1	16.6	5.4	5.9	14.9	5.2	14.7	15.4	39.2	13.6	14.1	39.9	12.2
Oct	6.9	6.0	6.1	15.7	5.4	6.0	14.7	5.2	14.5	15.1	38.3	13.4	13.9	33.3	12.6
Nov	6.9	6.0	6.1	16.4	5.4	5.9	15.4	5.1	14.3	14.4	35.5	12.9	14.2	36.5	12.7
Dec	6.7	5.8	5.9	15.8	5.3	5.6	14.5	4.9	13.7	13.5	36.2	11.8	13.9	37.1	12.3
1987: Jan	6.7	5.8	5.9	16.1	5.2	5.6	14.0	5.0	14.1	13.9	36.5	12.1	14.4	42.3	12.6
Feb	6.6	5.7	5.8	16.0	5.1	5.5	14.1	4.8	14.0	13.7	37.9	11.9	14.3	38.0	12.6
Mar	6.5	5.6	5.8	16.8	5.0	5.4	13.7	4.7	13.9	13.3	36.1	11.6	14.4	38.0	12.7
Apr	6.3	5.5	5.6	16.3	4.9	5.3	13.3	4.6	13.0	12.9	37.8	11.0	13.2	36.3	11.6
May	6.3	5.4	5.6	17.0	4.8	5.2	13.3	4.5	13.7	14.1	38.3	12.3	13.2	36.6	11.6
June	6.1	5.3	5.5	14.8	4.9	5.1	13.0	4.4	12.8	12.7	31.4	11.4	12.9	35.4	11.3
July	6.0	5.2	5.2	13.5	4.7	5.1	13.1	4.5	12.7	12.6	32.4	11.2	12.8	33.1	11.4
Aug	6.0	5.2	5.2	15.2	4.6	5.1	12.9	4.4	12.4	12.5	33.7	10.7	12.4	27.1	11.3
Sept	5.9	5.1	5.1	15.1	4.4	5.1	13.4	4.5	12.3	11.7	31.5	10.1	13.0	30.0	11.7
Oct	6.0	5.2	5.3	15.1	4.6	5.0	13.8	4.3	12.1	11.5	32.5	9.8	12.8	35.2	11.0
Nov	5.9	5.1	5.1	14.8	4.4	5.0	13.3	4.4	12.2	11.8	32.2	10.2	12.5	35.8	10.8
Dec	5.8	4.9	4.9	14.9	4.3	4.9	12.3	4.4	12.2	11.9	33.5	10.1	12.5	33.4	10.9

[1] Unemployed as percent of civilian labor force in group specified.

Note.—See footnote 5 and Note, Table B–32.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–41.—*Unemployment by duration and reason, 1947–87*

[Monthly data seasonally adjusted [1]]

Year or month	Unemployment	Duration of unemployment						Reason for unemployment			
		Less than 5 weeks	5–14 weeks	15–26 weeks	27 weeks and over	Average (mean) duration	Median duration	Job losers	Job leavers	Reentrants	New entrants
	Thousands of persons 16 years of age and over					Weeks		Thousands of persons 16 years of age and over			
1947	2,311	1,210	704	234	164						
1948	2,276	1,300	669	193	116	8.6					
1949	3,637	1,756	1,194	428	256	10.0					
1950	3,288	1,450	1,055	425	357	12.1					
1951	2,055	1,177	574	166	137	9.7					
1952	1,883	1,135	516	148	84	8.4					
1953	1,834	1,142	482	132	78	8.0					
1954	3,532	1,605	1,116	495	317	11.8					
1955	2,852	1,335	815	366	336	13.0					
1956	2,750	1,412	805	301	232	11.3					
1957	2,859	1,408	891	321	239	10.5					
1958	4,602	1,753	1,396	785	667	13.9					
1959	3,740	1,585	1,114	469	571	14.4					
1960	3,852	1,719	1,176	503	454	12.8					
1961	4,714	1,806	1,376	728	804	15.6					
1962	3,911	1,663	1,134	534	585	14.7					
1963	4,070	1,751	1,231	535	553	14.0					
1964	3,786	1,697	1,117	491	482	13.3					
1965	3,366	1,628	983	404	351	11.8					
1966	2,875	1,573	779	287	239	10.4					
1967 [2]	2,975	1,634	893	271	177	8.7		1,229	438	945	396
1968	2,817	1,594	810	256	156	8.4	4.5	1,070	431	909	407
1969	2,832	1,629	827	242	133	7.8	4.4	1,017	436	965	413
1970	4,093	2,139	1,290	428	235	8.6	4.9	1,811	550	1,228	504
1971	5,016	2,245	1,585	668	519	11.3	6.3	2,323	590	1,472	630
1972	4,882	2,242	1,472	601	566	12.0	6.2	2,108	641	1,456	677
1973	4,365	2,224	1,314	483	343	10.0	5.2	1,694	683	1,340	649
1974	5,156	2,604	1,597	574	381	9.8	5.2	2,242	768	1,463	681
1975	7,929	2,940	2,484	1,303	1,203	14.2	8.4	4,386	827	1,892	823
1976	7,406	2,844	2,196	1,018	1,348	15.8	8.2	3,679	903	1,928	895
1977	6,991	2,919	2,132	913	1,028	14.3	7.0	3,166	909	1,963	953
1978	6,202	2,855	1,923	766	648	11.9	5.9	2,585	874	1,857	885
1979	6,137	2,950	1,946	706	535	10.8	5.4	2,635	880	1,806	817
1980	7,637	3,295	2,470	1,052	820	11.9	6.5	3,947	891	1,927	872
1981	8,273	3,449	2,539	1,122	1,162	13.7	6.9	4,267	923	2,102	981
1982	10,678	3,883	3,311	1,708	1,776	15.6	8.7	6,268	840	2,384	1,185
1983	10,717	3,570	2,937	1,652	2,559	20.0	10.1	6,258	830	2,412	1,216
1984	8,539	3,350	2,451	1,104	1,634	18.2	7.9	4,421	823	2,184	1,110
1985	8,312	3,498	2,509	1,025	1,280	15.6	6.8	4,139	877	2,256	1,039
1986	8,237	3,448	2,557	1,045	1,187	15.0	6.9	4,033	1,015	2,160	1,029
1987	7,425	3,246	2,196	943	1,040	14.5	6.5	3,566	965	1,974	920
1986: Jan	7,847	3,331	2,466	1,005	1,099	15.0	6.8	3,797	992	2,085	1,001
Feb	8,427	3,520	2,588	1,139	1,192	15.4	7.0	4,145	976	2,264	1,047
Mar	8,330	3,510	2,597	1,082	1,169	14.6	6.9	4,187	986	2,168	1,002
Apr	8,373	3,615	2,675	949	1,171	14.6	6.5	4,005	1,105	2,211	1,054
May	8,444	3,574	2,720	1,045	1,161	14.7	6.8	4,212	999	2,177	1,027
June	8,441	3,463	2,690	1,008	1,264	15.1	7.2	4,264	1,018	2,113	1,093
July	8,278	3,425	2,546	1,062	1,203	15.2	7.0	4,064	1,011	2,222	1,033
Aug	8,115	3,453	2,393	1,091	1,198	15.5	7.1	3,887	976	2,172	1,049
Sept	8,298	3,416	2,555	1,118	1,237	15.4	7.2	4,066	1,027	2,164	1,045
Oct	8,230	3,419	2,547	989	1,215	15.2	7.0	3,959	1,015	2,239	932
Nov	8,214	3,374	2,589	1,063	1,172	15.0	7.0	3,942	1,058	2,093	1,085
Dec	7,919	3,335	2,403	1,042	1,152	15.0	7.1	3,913	1,024	2,005	990
1987: Jan	7,964	3,365	2,489	1,023	1,164	15.0	7.0	3,971	909	2,059	1,048
Feb	7,886	3,343	2,444	1,004	1,125	14.8	6.7	3,835	1,033	2,038	1,007
Mar	7,791	3,352	2,411	944	1,111	14.9	6.7	3,791	996	2,078	952
Apr	7,557	3,195	2,256	984	1,076	14.8	6.9	3,705	955	1,965	918
May	7,573	3,308	2,165	974	1,093	14.8	6.6	3,612	931	1,995	999
June	7,308	3,138	2,151	973	1,056	14.7	6.6	3,554	959	1,980	854
July	7,251	3,186	2,144	945	975	14.2	6.6	3,529	989	1,930	844
Aug	7,256	3,203	2,142	834	1,062	14.3	6.4	3,389	992	1,969	855
Sept	7,091	3,220	1,949	917	987	14.2	5.8	3,313	981	1,908	882
Oct	7,177	3,223	2,093	844	957	14.1	6.2	3,388	960	1,845	914
Nov	7,090	3,218	2,029	899	935	14.0	6.1	3,307	926	1,974	855
Dec	6,978	3,229	1,968	892	899	14.2	6.0	3,200	946	1,945	909

[1] Because of independent seasonal adjustment of the various series, detail will not add to totals.

[2] Data for 1967 by reason for unemployment are not strictly comparable with those for later years and the total by reason is not equal to total unemployment.

Note.—See footnote 5 and Note, Table B–32.

Source: Department of Labor, Bureau of Labor Statistics.

Table B–42.—*Unemployment insurance programs, selected data, 1955–87*

Year or month	All programs			State programs					
	Covered employment[1]	Insured unemployment (weekly average)[2][3]	Total benefits paid (millions of dollars)[2][4]	Insured unemployment	Initial claims	Exhaustions[5]	Insured unemployment as percent of covered employment	Benefits paid	
								Total (millions of dollars)[4]	Average weekly check (dollars)[6]
	Thousands			Weekly average; thousands					
1955	40,018	1,399	1,560.2	1,265	226	25	3.5	1,350.3	25.04
1956	42,751	1,323	1,540.6	1,215	227	20	3.2	1,380.7	27.02
1957	43,436	1,571	1,913.0	1,446	270	23	3.6	1,733.9	28.17
1958	44,411	2,773	4,290.6	2,510	369	50	6.4	3,512.7	30.58
1959	45,728	1,860	2,854.3	1,684	277	33	4.4	2,279.0	30.41
1960	46,334	2,071	3,022.8	1,908	331	31	4.8	2,726.7	32.87
1961	46,266	2,994	4,358.1	2,290	350	46	5.6	3,422.7	33.80
1962	47,776	1,946	3,145.1	1,783	302	32	4.4	2,675.4	34.56
1963	48,434	[7] 1,973	3,025.9	[7] 1,806	[7] 298	30	4.3	2,774.7	35.27
1964	49,637	1,753	2,749.2	1,605	268	26	3.8	2,522.1	35.92
1965	51,580	1,450	2,360.4	1,328	232	21	3.0	2,166.0	37.19
1966	54,739	1,129	1,890.9	1,061	203	15	2.3	1,771.3	39.75
1967	56,342	1,270	2,221.5	1,205	226	17	2.5	2,092.3	41.25
1968	57,977	1,187	2,191.0	1,111	201	16	2.2	2,031.6	43.43
1969	59,999	1,177	2,298.6	1,101	200	16	2.1	2,127.9	46.17
1970	59,526	2,070	4,209.3	1,805	296	25	3.4	3,848.5	50.34
1971	59,375	2,608	6,154.0	2,150	295	39	4.1	4,957.0	54.02
1972	66,458	2,192	5,491.1	1,848	261	35	3.5	4,471.0	56.76
1973	69,897	1,793	4,517.3	1,632	247	29	2.7	4,007.6	59.00
1974	72,451	2,558	6,933.9	2,262	363	37	3.5	5,974.9	64.25
1975	71,037	4,937	16,802.4	3,986	478	81	6.0	11,754.7	70.23
1976	73,459	3,846	12,344.8	2,991	386	63	4.6	8,974.5	75.16
1977	76,419	3,308	10,998.9	2,655	375	55	3.9	8,357.2	78.79
1978	88,804	2,645	9,006.9	2,359	346	39	3.3	7,717.2	83.67
1979	92,062	2,592	9,401.3	2,434	388	39	2.9	8,612.9	89.67
1980	92,659	3,837	16,175.4	3,350	488	59	3.9	13,761.1	98.95
1981	93,300	3,410	15,287.1	3,047	460	57	3.5	13,262.1	106.70
1982	91,628	4,594	23,774.8	4,061	583	80	4.6	20,649.5	119.37
1983	91,898	3,775	20,206.2	3,396	438	80	3.9	17,762.8	123.59
1984	96,474	2,561	13,109.6	2,476	377	50	2.8	12,594.7	123.47
1985	99,186	2,693	14,495.1	2,611	396	50	2.9	13,977.8	128.23
1986	[8] 101,099	2,746	15,892.1	2,650	378	52	2.8	15,402.8	135.72
				**	**		**		
1986: Jan		3,370	1,715.1	2,602	381	52	2.8	1,662.6	133.57
Feb		3,295	1,543.5	2,594	381	52	2.8	1,495.7	135.00
Mar		3,144	1,585.0	2,625	391	55	2.8	1,539.3	135.59
Apr		2,799	1,516.8	2,610	384	58	2.8	1,472.1	135.23
May		2,556	1,297.5	2,666	383	53	2.9	1,260.8	135.81
June		2,474	1,224.4	2,673	377	51	2.9	1,177.5	135.39
July		2,632	1,368.1	2,675	375	54	2.8	1,315.7	134.13
Aug		2,483	1,211.6	2,688	390	50	2.9	1,166.8	135.05
Sept		2,335	1,192.6	2,694	372	48	2.9	1,152.5	136.90
Oct		2,296	1,196.1	2,622	364	49	2.8	1,157.6	138.01
Nov		2,478	1,074.9	2,571	356	47	2.7	1,130.6	137.51
Dec		2,841	1,507.5	2,529	355	52	2.7	1,466.7	137.86
1987: Jan		3,276	1,599.2	2,523	363	52	2.7	1,532.7	139.11
Feb		3,155	1,554.1	2,470	361	55	2.6	1,499.8	140.79
Mar		2,933	1,662.6	2,439	342	56	2.6	1,606.8	140.98
Apr		2,526	1,413.1	2,367	334	55	2.5	1,372.1	140.22
May		2,216	1,116.0	2,321	333	49	2.4	1,084.3	140.53
June		2,108	1,135.2	2,297	331	46	2.4	1,105.3	139.66
July		2,210	1,143.8	2,273	329	51	2.4	1,114.9	138.13
Aug		2,030	1,031.3	2,223	307	43	2.3	1,005.0	139.07
Sept		1,800	978.3	2,102	289	39	2.2	952.7	140.19
Oct		1,759	991.6	2,035	293	37	2.1	967.4	141.52
Nov		1,931	886.5	2,037	303	36	2.1	866.3	138.97
Dec			1,274.4	2,090	317		2.2		

**Monthly data are seasonally adjusted.

[1] Includes persons under the State, UCFE (Federal employee, effective January 1955), and RRB (Railroad Retirement Board) programs. Beginning October 1958, also includes the UCX program (unemployment compensation for ex-servicemen).

[2] Includes State, UCFE, RR, UCX, UCV (unemployment compensation for veterans, October 1952–January 1960), and SRA (Servicemen's Readjustment Act, September 1944–September 1951) programs. Also includes Federal and State extended benefit programs. Does not include FSB (Federal supplemental benefits), SUA (special unemployment assistance), and Federal Supplemental Compensation programs.

[3] Covered workers who have completed at least 1 week of unemployment.

[4] Annual data are net amounts and monthly data are gross amounts.

[5] Individuals receiving final payments in benefit year.

[6] For total unemployment only.

[7] Programs include Puerto Rican sugarcane workers for initial claims and insured unemployment beginning July 1963.

[8] Latest data available for all programs combined. Workers covered by State programs account for about 97 percent of wage and salary earners.

Source: Department of Labor, Employment and Training Administration.

Table B-43.—*Employees on nonagricultural payrolls, by major industry, 1946–87*

[Thousands of persons; monthly data seasonally adjusted]

Year or month	Total	Goods-producing industries					
		Total	Mining	Construction	Manufacturing		
					Total	Durable goods	Nondurable goods
1946	41,652	17,248	862	1,683	14,703	7,742	6,962
1947	43,857	18,509	955	2,009	15,545	8,385	7,159
1948	44,866	18,774	994	2,198	15,582	8,326	7,256
1949	43,754	17,565	930	2,194	14,441	7,489	6,953
1950	45,197	18,506	901	2,364	15,241	8,094	7,147
1951	47,819	19,959	929	2,637	16,393	9,089	7,304
1952	48,793	20,198	898	2,668	16,632	9,349	7,284
1953	50,202	21,074	866	2,659	17,549	10,110	7,438
1954	48,990	19,751	791	2,646	16,314	9,129	7,185
1955	50,641	20,513	792	2,839	16,882	9,541	7,341
1956	52,369	21,104	822	3,039	17,243	9,833	7,411
1957	52,853	20,964	828	2,962	17,174	9,855	7,321
1958	51,324	19,513	751	2,817	15,945	8,829	7,116
1959	53,268	20,411	732	3,004	16,675	9,373	7,303
1960	54,189	20,434	712	2,926	16,796	9,459	7,337
1961	53,999	19,857	672	2,859	16,326	9,070	7,256
1962	55,549	20,451	650	2,948	16,853	9,480	7,373
1963	56,653	20,640	635	3,010	16,995	9,616	7,380
1964	58,283	21,005	634	3,097	17,274	9,816	7,458
1965	60,765	21,926	632	3,232	18,062	10,405	7,656
1966	63,901	23,158	627	3,317	19,214	11,282	7,930
1967	65,803	23,308	613	3,248	19,447	11,439	8,007
1968	67,897	23,737	606	3,350	19,781	11,626	8,155
1969	70,384	24,361	619	3,575	20,167	11,895	8,272
1970	70,880	23,578	623	3,588	19,367	11,208	8,158
1971	71,214	22,935	609	3,704	18,623	10,636	7,987
1972	73,675	23,668	628	3,889	19,151	11,049	8,102
1973	76,790	24,893	642	4,097	20,154	11,891	8,262
1974	78,265	24,794	697	4,020	20,077	11,925	8,152
1975	76,945	22,600	752	3,525	18,323	10,688	7,635
1976	79,382	23,352	779	3,576	18,997	11,077	7,920
1977	82,471	24,346	813	3,851	19,682	11,597	8,086
1978	86,697	25,585	851	4,229	20,505	12,274	8,231
1979	89,823	26,461	958	4,463	21,040	12,760	8,280
1980	90,406	25,658	1,027	4,346	20,285	12,187	8,098
1981	91,156	25,497	1,139	4,188	20,170	12,109	8,061
1982	89,566	23,813	1,128	3,905	18,781	11,039	7,741
1983	90,200	23,334	952	3,948	18,434	10,732	7,702
1984	94,496	24,727	966	4,383	19,378	11,505	7,873
1985	97,519	24,859	927	4,673	19,260	11,490	7,770
1986	99,610	24,681	783	4,904	18,994	11,244	7,750
1987 ᵖ	102,110	24,884	742	5,031	19,112	11,236	7,875
1986: Jan	98,776	24,821	886	4,810	19,125	11,377	7,748
Feb	98,914	24,768	867	4,811	19,090	11,345	7,745
Mar	99,013	24,711	838	4,830	19,043	11,307	7,736
Apr	99,252	24,770	812	4,919	19,039	11,305	7,734
May	99,389	24,708	786	4,910	19,012	11,277	7,735
June	99,323	24,628	769	4,900	18,959	11,218	7,741
July	99,601	24,628	764	4,924	18,940	11,199	7,741
Aug	99,772	24,639	748	4,946	18,945	11,206	7,739
Sept	100,039	24,620	739	4,948	18,933	11,181	7,752
Oct	100,209	24,611	735	4,942	18,934	11,169	7,765
Nov	100,415	24,630	730	4,946	18,954	11,174	7,780
Dec	100,567	24,630	724	4,936	18,970	11,175	7,795
1987: Jan	100,919	24,708	718	5,034	18,956	11,157	7,799
Feb	101,150	24,743	719	5,038	18,986	11,179	7,807
Mar	101,329	24,749	722	5,032	18,995	11,176	7,819
Apr	101,598	24,759	729	5,019	19,011	11,175	7,836
May	101,708	24,752	735	4,999	19,018	11,175	7,843
June	101,818	24,761	738	5,008	19,015	11,176	7,839
July	102,126	24,850	744	5,002	19,104	11,195	7,909
Aug	102,275	24,886	751	5,006	19,129	11,248	7,881
Sept	102,434	24,917	759	4,989	19,169	11,268	7,901
Oct	102,983	25,064	764	5,053	19,247	11,319	7,928
Nov	103,285	25,169	759	5,074	19,336	11,367	7,969
Dec ᵖ	103,596	25,258	759	5,122	19,377	11,401	7,976

See next page for continuation of table.

TABLE B–43.—*Employees on nonagricultural payrolls, by major industry, 1946–87*—Continued

[Thousands of persons; monthly data seasonally adjusted]

Year or month	Service-producing industries								
	Total	Transportation and public utilities	Wholesale trade	Retail trade	Finance, insurance, and real estate	Services	Government		
							Total	Federal	State and local
1946	24,404	4,061	2,291	6,084	1,675	4,697	5,595	2,254	3,341
1947	25,348	4,166	2,471	6,485	1,728	5,025	5,474	1,892	3,582
1948	26,092	4,189	2,605	6,667	1,800	5,181	5,650	1,863	3,787
1949	26,189	4,001	2,602	6,662	1,828	5,240	5,856	1,908	3,948
1950	26,691	4,034	2,635	6,751	1,888	5,357	6,026	1,928	4,098
1951	27,860	4,226	2,727	7,015	1,956	5,547	6,389	2,302	4,087
1952	28,595	4,248	2,812	7,192	2,035	5,699	6,609	2,420	4,188
1953	29,128	4,290	2,854	7,393	2,111	5,835	6,645	2,305	4,340
1954	29,239	4,084	2,867	7,368	2,200	5,969	6,751	2,188	4,563
1955	30,128	4,141	2,926	7,610	2,298	6,240	6,914	2,187	4,727
1956	31,266	4,244	3,018	7,840	2,389	6,497	7,278	2,209	5,069
1957	31,889	4,241	3,028	7,858	2,438	6,708	7,616	2,217	5,399
1958	31,811	3,976	2,980	7,770	2,481	6,765	7,839	2,191	5,648
1959	32,857	4,011	3,082	8,045	2,549	7,087	8,083	2,233	5,850
1960	33,755	4,004	3,143	8,248	2,629	7,378	8,353	2,270	6,083
1961	34,142	3,903	3,133	8,204	2,688	7,620	8,594	2,279	6,315
1962	35,098	3,906	3,198	8,368	2,754	7,982	8,890	2,340	6,550
1963	36,013	3,903	3,248	8,530	2,830	8,277	9,225	2,358	6,868
1964	37,278	3,951	3,337	8,823	2,911	8,660	9,596	2,348	7,248
1965	38,839	4,036	3,466	9,250	2,977	9,036	10,074	2,378	7,696
1966	40,743	4,158	3,597	9,648	3,058	9,498	10,784	2,564	8,220
1967	42,495	4,268	3,689	9,917	3,185	10,045	11,391	2,719	8,672
1968	44,160	4,318	3,779	10,320	3,337	10,567	11,839	2,737	9,102
1969	46,023	4,442	3,907	10,798	3,512	11,169	12,195	2,758	9,437
1970	47,302	4,515	3,993	11,047	3,645	11,548	12,554	2,731	9,823
1971	48,278	4,476	4,001	11,351	3,772	11,797	12,881	2,696	10,185
1972	50,007	4,541	4,113	11,836	3,908	12,276	13,334	2,684	10,649
1973	51,897	4,656	4,277	12,329	4,046	12,857	13,732	2,663	11,068
1974	53,471	4,725	4,433	12,554	4,148	13,441	14,170	2,724	11,446
1975	54,345	4,542	4,415	12,645	4,165	13,892	14,686	2,748	11,937
1976	56,030	4,582	4,546	13,209	4,271	14,551	14,871	2,733	12,138
1977	58,125	4,713	4,708	13,808	4,467	15,303	15,127	2,727	12,399
1978	61,113	4,923	4,969	14,573	4,724	16,252	15,672	2,753	12,919
1979	63,363	5,136	5,204	14,989	4,975	17,112	15,947	2,773	13,174
1980	64,748	5,146	5,275	15,035	5,160	17,890	16,241	2,866	13,375
1981	65,659	5,165	5,358	15,189	5,298	18,619	16,031	2,772	13,259
1982	65,753	5,082	5,278	15,179	5,341	19,036	15,837	2,739	13,098
1983	66,866	4,954	5,268	15,613	5,468	19,694	15,869	2,774	13,096
1984	69,769	5,159	5,555	16,545	5,689	20,797	16,024	2,807	13,216
1985	72,660	5,238	5,717	17,356	5,955	22,000	16,394	2,875	13,519
1986	74,930	5,244	5,735	17,845	6,297	23,099	16,711	2,899	13,811
1987 ^{p}	77,226	5,377	5,797	18,262	6,589	24,138	17,063	2,943	14,120
1986: Jan	73,955	5,265	5,744	17,635	6,127	22,617	16,567	2,916	13,653
Feb	74,146	5,260	5,742	17,670	6,159	22,696	16,619	2,916	13,704
Mar	74,302	5,259	5,735	17,731	6,186	22,772	16,619	2,915	13,705
Apr	74,482	5,245	5,745	17,756	6,227	22,868	16,641	2,911	13,731
May	74,681	5,247	5,749	17,798	6,257	22,971	16,659	2,899	13,762
June	74,695	5,142	5,712	17,821	6,287	23,080	16,653	2,878	13,777
July	74,973	5,237	5,735	17,866	6,323	23,202	16,610	2,872	13,736
Aug	75,133	5,202	5,736	17,913	6,351	23,284	16,647	2,882	13,752
Sept	75,419	5,255	5,736	17,939	6,374	23,317	16,798	2,902	13,896
Oct	75,598	5,251	5,731	17,980	6,395	23,369	16,872	2,897	13,978
Nov	75,785	5,278	5,728	18,009	6,418	23,452	16,900	2,900	14,001
Dec	75,937	5,286	5,725	18,007	6,451	23,544	16,924	2,904	14,020
1987: Jan	76,211	5,304	5,741	18,080	6,480	23,670	16,936	2,912	14,025
Feb	76,407	5,315	5,757	18,140	6,501	23,759	16,935	2,916	14,020
Mar	76,580	5,333	5,766	18,136	6,526	23,842	16,977	2,922	14,055
Apr	76,839	5,348	5,772	18,197	6,558	23,926	17,038	2,933	14,105
May	76,956	5,344	5,775	18,205	6,576	24,025	17,031	2,935	14,096
June	77,057	5,350	5,781	18,226	6,586	24,083	17,031	2,935	14,096
July	77,276	5,363	5,797	18,274	6,608	24,214	17,020	2,936	14,084
Aug	77,389	5,377	5,807	18,256	6,624	24,279	17,046	2,940	14,106
Sept	77,517	5,416	5,815	18,314	6,629	24,295	17,048	2,962	14,086
Oct	77,919	5,436	5,831	18,408	6,650	24,406	17,188	2,965	14,223
Nov	78,116	5,459	5,851	18,443	6,657	24,493	17,213	2,977	14,236
Dec ^{p}	78,338	5,468	5,873	18,433	6,667	24,623	17,274	2,979	14,295

Note.—Data in Tables B–43 through B–45 are based on reports from employing establishments and relate to full- and part-time wage and salary workers in nonagricultural establishments who received pay for any part of the pay period which includes the 12th of the month. Not comparable with labor force data (B–32 through B–41), which include proprietors, self-employed persons, domestic servants, and unpaid family workers; which count persons as employed when they are not at work because of industrial disputes, bad weather, etc., even if they are not paid for the time off; and which are based on a sample of the working-age population. For description and details of the various establishment data, see "Employment and Earnings."

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B-44.—*Average weekly hours and hourly earnings in selected private nonagricultural industries, 1947–87*

[For production or nonsupervisory workers; monthly data seasonally adjusted, except as noted]

Year or month	Average weekly hours				Average hourly earnings, current dollars				Adjusted hourly earnings, total private nonagricultural [2]			
									Index, 1977=100		Percent change from a year earlier [4]	
	Total private nonagricultural [1]	Manufacturing	Construction	Retail trade	Total private nonagricultural [1]	Manufacturing	Construction	Retail trade	Current dollars	1977 dollars [3]	Current dollars	1977 dollars
1947	40.3	40.4	38.2	40.3	$1.131	$1.216	$1.540	$0.838	21.6	58.5		
1948	40.0	40.0	38.1	40.2	1.225	1.327	1.712	.901	23.4	58.9	8.3	0.7
1949	39.4	39.1	37.7	40.4	1.275	1.376	1.792	.951	24.5	62.3	4.7	5.8
1950	39.8	40.5	37.4	40.4	1.335	1.439	1.863	.983	25.4	64.0	3.7	2.7
1951	39.9	40.6	38.1	40.4	1.45	1.56	2.02	1.06	27.3	63.6	7.5	−.6
1952	39.9	40.7	38.9	39.8	1.52	1.64	2.13	1.09	28.7	65.5	5.1	3.0
1953	39.6	40.5	37.9	39.1	1.61	1.74	2.28	1.16	30.3	68.7	5.6	4.9
1954	39.1	39.6	37.2	39.2	1.65	1.78	2.38	1.20	31.3	70.5	3.3	2.6
1955	39.6	40.7	37.1	39.0	1.71	1.85	2.45	1.25	32.4	73.3	3.5	4.0
1956	39.3	40.4	37.5	38.6	1.80	1.95	2.57	1.30	34.0	75.9	4.9	3.5
1957	38.8	39.8	37.0	38.1	1.89	2.04	2.71	1.37	35.7	76.9	5.0	1.3
1958	38.5	39.2	36.8	38.1	1.95	2.10	2.82	1.42	37.2	78.0	4.2	1.4
1959	39.0	40.3	37.0	38.2	2.02	2.19	2.93	1.47	38.5	80.0	3.5	2.6
1960	38.6	39.7	36.7	38.0	2.09	2.26	3.07	1.52	39.8	81.4	3.4	1.8
1961	38.6	39.8	36.9	37.6	2.14	2.32	3.20	1.56	41.0	83.0	3.0	2.0
1962	38.7	40.4	37.0	37.4	2.22	2.39	3.31	1.63	42.4	85.0	3.4	2.4
1963	38.8	40.5	37.3	37.3	2.28	2.45	3.41	1.68	43.6	86.3	2.8	1.5
1964	38.7	40.7	37.2	37.0	2.36	2.53	3.55	1.75	44.8	87.5	2.8	1.4
1965	38.8	41.2	37.4	36.6	2.46	2.61	3.70	1.82	46.4	89.0	3.6	1.7
1966	38.6	41.4	37.6	35.9	2.56	2.71	3.89	1.91	48.4	90.3	4.3	1.5
1967	38.0	40.6	37.7	35.3	2.68	2.82	4.11	2.01	50.8	92.2	5.0	2.1
1968	37.8	40.7	37.3	34.7	2.85	3.01	4.41	2.16	53.9	94.0	6.1	2.0
1969	37.7	40.6	37.9	34.2	3.04	3.19	4.79	2.30	57.5	95.0	6.7	1.1
1970	37.1	39.8	37.3	33.8	3.23	3.35	5.24	2.44	61.3	95.7	6.6	.7
1971	36.9	39.9	37.2	33.7	3.45	3.57	5.69	2.60	65.7	98.3	7.2	2.7
1972	37.0	40.5	36.5	33.4	3.70	3.82	6.06	2.75	69.8	101.2	6.2	3.0
1973	36.9	40.7	36.8	33.1	3.94	4.09	6.41	2.91	74.1	101.1	6.2	−.1
1974	36.5	40.0	36.6	32.7	4.24	4.42	6.81	3.14	80.0	98.3	8.0	−2.8
1975	36.1	39.5	36.4	32.4	4.53	4.83	7.31	3.36	86.7	97.6	8.4	−.7
1976	36.1	40.1	36.8	32.1	4.86	5.22	7.71	3.57	92.9	99.0	7.2	1.4
1977	36.0	40.3	36.5	31.6	5.25	5.68	8.10	3.85	100.0	100.0	7.6	1.0
1978	35.8	40.4	36.8	31.0	5.69	6.17	8.66	4.20	108.2	100.5	8.2	.5
1979	35.7	40.2	37.0	30.6	6.16	6.70	9.27	4.53	116.8	97.4	7.9	−3.1
1980	35.3	39.7	37.0	30.2	6.66	7.27	9.94	4.88	127.3	93.5	9.0	−4.0
1981	35.2	39.8	36.9	30.1	7.25	7.99	10.82	5.25	138.9	92.6	9.1	−1.0
1982	34.8	38.9	36.7	29.9	7.68	8.49	11.63	5.48	148.5	93.4	6.9	.9
1983	35.0	40.1	37.1	29.8	8.02	8.83	11.94	5.74	155.4	94.9	4.6	1.6
1984	35.2	40.7	37.8	29.8	8.32	9.19	12.13	5.85	160.3	94.6	3.2	−.3
1985	34.9	40.5	37.7	29.4	8.57	9.54	12.32	5.94	165.2	94.1	3.1	−.5
1986	34.8	40.7	37.4	29.2	8.76	9.73	12.47	6.03	169.3	95.0	2.5	1.0
1987 [p]	34.8	41.0	37.7	29.3	8.98	9.91	12.66	6.11	173.5	94.0	2.5	−1.1
1986: Jan	35.0	40.8	38.2	29.4	8.68	9.65	12.31	6.00	167.5	93.6	2.9	−.9
Feb	34.8	40.6	36.4	29.3	8.71	9.69	12.36	6.00	168.2	94.4	2.9	−.1
Mar	34.9	40.7	36.9	29.3	8.73	9.71	12.28	6.00	168.5	95.1	2.9	1.0
Apr	34.8	40.7	37.5	29.2	8.72	9.70	12.38	6.01	168.5	95.4	2.6	1.5
May	34.8	40.7	37.5	29.2	8.74	9.73	12.42	6.01	168.9	95.3	2.7	1.5
June	34.7	40.6	37.2	29.1	8.75	9.72	12.46	6.02	169.2	95.2	2.5	1.1
July	34.7	40.6	37.3	29.2	8.74	9.74	12.44	6.02	169.1	95.1	2.4	1.2
Aug	34.7	40.8	37.5	29.2	8.77	9.75	12.48	6.03	169.5	95.2	2.4	1.1
Sept	34.7	40.8	37.6	29.1	8.78	9.75	12.48	6.05	169.8	95.0	2.0	.6
Oct	34.7	40.7	37.5	29.1	8.82	9.77	12.57	6.06	170.2	95.1	2.4	1.2
Nov	34.8	40.8	37.3	29.2	8.86	9.78	12.70	6.07	171.2	95.5	2.6	1.7
Dec	34.6	40.8	37.3	28.9	8.84	9.79	12.65	6.09	171.1	95.3	2.0	1.3
1987: Jan	34.7	40.9	38.1	29.0	8.86	9.79	12.51	6.05	171.2	94.7	2.2	1.1
Feb	34.9	41.1	38.0	29.3	8.88	9.81	12.48	6.04	171.8	94.6	2.1	.3
Mar	34.8	40.9	37.9	29.3	8.91	9.83	12.62	6.05	172.2	94.4	2.2	−.6
Apr	34.7	40.6	37.4	29.5	8.91	9.86	12.61	6.08	172.6	94.2	2.5	−1.2
May	34.9	41.0	38.1	29.4	8.95	9.88	12.65	6.09	172.9	94.0	2.4	−1.3
June	34.8	41.0	37.6	29.2	8.94	9.88	12.72	6.10	172.9	93.8	2.2	−1.4
July	34.8	41.0	37.8	29.3	8.96	9.87	12.67	6.11	173.2	93.7	2.4	−1.4
Aug	34.9	41.0	37.8	29.6	9.02	9.93	12.71	6.13	174.1	93.7	2.7	−1.5
Sept	34.6	40.6	35.5	29.6	9.02	10.02	12.67	6.19	174.6	93.8	2.9	−1.4
Oct	34.9	41.3	38.3	29.3	9.08	10.00	12.68	6.16	174.9	93.7	2.8	−1.7
Nov	34.9	41.2	38.0	29.2	9.12	10.01	12.84	6.17	175.8	93.8	2.7	−1.8
Dec [p]	34.7	41.0	38.2	28.8	9.10	10.02	12.65	6.19	175.4	93.6	2.6	−1.8

[1] Also includes other private industry groups shown in Table B–43.

[2] Adjusted for overtime (in manufacturing only) and for interindustry employment shifts.

[3] Current-dollar earnings index divided by the consumer price index for urban wage earners and clerical workers on a 1977=100 base.

[4] Monthly percent changes are computed from indexes to two decimal places and are based on data not seasonally adjusted.

Note.—See Note, Table B–43.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–45.—*Average weekly earnings in selected private nonagricultural industries, 1947–87*

[For production or nonsupervisory workers; monthly data seasonally adjusted, except as noted]

Year or month	Average weekly earnings					Percent change from a year earlier, total private nonagricultural [3]	
	Total private nonagricultural [1]		Manufacturing (current dollars)	Construction (current dollars)	Retail trade (current dollars)		
	Current dollars	1977 dollars [2]				Current dollars	1977 dollars
1947	$45.58	$123.52	$49.13	$58.83	$33.77	....	....
1948	49.00	123.43	53.08	65.23	36.22	7.5	−0.1
1949	50.24	127.84	53.80	67.56	38.42	2.5	3.6
1950	53.13	133.83	58.28	69.68	39.71	5.8	4.7
1951	57.86	134.87	63.34	76.96	42.82	8.9	.8
1952	60.65	138.47	66.75	82.86	43.38	4.8	2.7
1953	63.76	144.58	70.47	86.41	45.36	5.1	4.4
1954	64.52	145.32	70.49	88.54	47.04	1.2	.5
1955	67.72	153.21	75.30	90.90	48.75	5.0	5.4
1956	70.74	157.90	78.78	96.38	50.18	4.5	3.1
1957	73.33	158.04	81.19	100.27	52.20	3.7	.1
1958	75.08	157.40	82.32	103.78	54.10	2.4	−.4
1959	78.78	163.78	88.26	108.41	56.15	4.9	4.1
1960	80.67	164.97	89.72	112.67	57.76	2.4	.7
1961	82.60	167.21	92.34	118.08	58.66	2.4	1.4
1962	85.91	172.16	96.56	122.47	60.96	4.0	3.0
1963	88.46	175.17	99.23	127.19	62.66	3.0	1.7
1964	91.33	178.38	102.97	132.06	64.75	3.2	1.8
1965	95.45	183.21	107.53	138.38	66.61	4.5	2.7
1966	98.82	184.37	112.19	146.26	68.57	3.5	.6
1967	101.84	184.83	114.49	154.95	70.95	3.1	.2
1968	107.73	187.68	122.51	164.49	74.95	5.8	1.5
1969	114.61	189.44	129.51	181.54	78.66	6.4	.9
1970	119.83	186.94	133.33	195.45	82.47	4.6	−1.3
1971	127.31	190.58	142.44	211.67	87.62	6.2	1.9
1972	136.90	198.41	154.71	221.19	91.85	7.5	4.1
1973	145.39	198.35	166.46	235.89	96.32	6.2	−.0
1974	154.76	190.12	176.80	249.25	102.68	6.4	−4.1
1975	163.53	184.16	190.79	266.08	108.86	5.7	−3.1
1976	175.45	186.85	209.32	283.73	114.60	7.3	1.5
1977	189.00	189.00	228.90	295.65	121.66	7.7	1.2
1978	203.70	189.31	249.27	318.69	130.20	7.8	.2
1979	219.91	183.41	269.34	342.99	138.62	8.0	−3.1
1980	235.10	172.74	288.62	367.78	147.38	6.9	−5.8
1981	255.20	170.13	318.00	399.26	158.03	8.5	−1.5
1982	267.26	168.09	330.26	426.82	163.85	4.7	−1.2
1983	280.70	171.26	354.08	442.97	171.05	5.0	1.9
1984	292.86	172.78	374.03	458.51	174.33	4.3	.9
1985	299.09	170.42	386.37	464.46	174.64	2.1	−1.4
1986	304.85	171.07	396.01	466.38	176.08	1.9	.4
1987 [p]	312.50	169.28	406.31	477.28	179.02	2.5	−1.0
1986: Jan	303.80	169.82	393.72	470.24	176.40	3.1	−.6
Feb	303.11	170.10	393.41	449.90	175.80	2.5	−.5
Mar	304.68	171.84	395.20	453.13	175.80	2.5	.6
Apr	303.46	171.83	394.79	464.25	175.49	2.5	1.3
May	304.15	171.74	396.01	465.75	175.49	2.0	.8
June	303.63	170.77	394.63	463.51	175.18	1.2	−.1
July	303.28	170.57	395.44	464.01	175.78	1.5	.3
Aug	304.32	170.97	397.80	468.00	176.08	1.7	.5
Sept	304.67	170.59	397.80	469.25	176.06	1.2	−.2
Oct	306.05	171.07	397.64	471.38	176.35	1.5	.3
Nov	308.33	171.96	399.02	473.71	177.24	2.1	1.2
Dec	305.86	170.40	399.43	471.85	176.00	.5	−.2
1987: Jan	307.44	170.04	400.41	476.63	175.45	1.2	.1
Feb	309.91	170.75	403.19	474.24	176.97	2.4	.5
Mar	310.07	170.09	402.05	478.30	177.27	1.8	−1.0
Apr	309.18	168.77	400.32	471.61	179.36	1.8	−1.9
May	312.36	168.95	405.08	481.97	179.05	2.6	−1.1
June	311.11	168.71	405.08	478.27	178.12	2.6	−1.0
July	311.81	168.73	404.67	478.93	179.02	3.0	−.9
Aug	314.80	169.52	407.13	480.44	181.45	3.3	−.9
Sept	312.09	167.70	406.81	449.79	183.22	2.4	−1.8
Oct	316.89	169.64	413.00	485.64	180.49	3.7	−.9
Nov	318.29	169.85	412.41	487.92	180.16	3.2	−1.3
Dec [p]	315.77	168.41	410.82	483.23	178.27	3.2	−1.2

[1] Also includes other private industry groups shown in Table B–43.
[2] Earnings in current dollars divided by the consumer price index for urban wage earners and clerical workers on a 1977 = 100 base.
[3] Based on data not seasonally adjusted.

Note.—See Note, Table B–43.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–46.—*Productivity and related data, business sector, 1947–87*

[1977=100; quarterly data seasonally adjusted]

Year or quarter	Output per hour of all persons		Output[1]		Hours of all persons[2]		Compensation per hour[3]		Real compensation per hour[4]		Unit labor costs		Implicit price deflator[5]	
	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector
1947	44.9	51.4	36.2	35.2	80.6	68.6	16.6	18.0	45.2	48.9	37.0	35.1	35.5	34.0
1948	47.2	53.3	38.3	37.2	81.2	69.8	18.1	19.6	45.5	49.3	38.3	36.7	38.0	36.4
1949	47.7	54.2	37.4	36.4	78.5	67.0	18.4	20.2	46.7	51.3	38.5	37.2	37.8	36.9
1950	51.7	57.7	41.0	39.9	79.3	69.1	19.7	21.4	49.6	53.9	38.1	37.1	38.4	37.5
1951	53.8	59.4	43.9	43.0	81.6	72.3	21.6	23.3	50.5	54.3	40.3	39.2	40.8	39.6
1952	55.4	60.7	45.3	44.4	81.7	73.0	23.0	24.6	52.5	56.1	41.5	40.5	41.4	40.4
1953	57.5	62.1	47.4	46.4	82.5	74.8	24.6	26.0	55.6	58.8	42.7	41.9	41.7	41.1
1954	58.4	63.0	46.5	45.5	79.7	72.2	25.3	26.8	57.2	60.5	43.4	42.6	42.2	41.8
1955	60.1	64.8	49.7	48.7	82.7	75.1	26.0	27.8	58.8	62.9	43.2	42.9	43.2	43.1
1956	60.9	65.2	51.1	50.2	83.9	77.0	27.7	29.5	61.8	65.8	45.5	45.3	44.6	44.5
1957	62.5	66.5	51.7	50.9	82.7	76.6	29.5	31.2	63.6	67.2	47.2	47.0	46.2	46.1
1958	64.4	68.0	50.7	49.8	78.8	73.3	30.9	32.5	64.8	68.1	48.0	47.7	46.9	46.6
1959	66.5	70.2	54.4	53.7	81.8	76.4	32.2	33.8	67.1	70.3	48.5	48.2	47.8	47.8
1960	67.6	71.0	55.4	54.6	81.9	76.9	33.6	35.3	68.9	72.3	49.7	49.7	48.5	48.5
1961	70.0	73.2	56.5	55.7	80.7	76.0	34.9	36.5	70.8	73.8	49.9	49.8	48.8	48.8
1962	72.5	75.6	59.4	58.7	81.9	77.6	36.6	38.0	73.2	76.0	50.4	50.2	49.7	49.7
1963	75.4	78.3	62.1	61.5	82.4	78.5	37.9	39.3	75.1	77.7	50.3	50.2	50.2	50.2
1964	78.7	81.4	65.9	65.4	83.7	80.3	39.9	41.1	78.0	80.3	50.7	50.5	50.7	50.8
1965	81.0	83.4	70.0	69.5	86.4	83.3	41.5	42.5	79.6	81.6	51.2	50.9	51.9	51.9
1966	83.2	85.2	73.6	73.4	88.5	86.2	44.3	45.0	82.7	84.0	53.3	52.8	53.6	53.5
1967	85.5	87.1	75.6	75.3	88.5	86.4	46.7	47.5	84.8	86.2	54.7	54.5	54.9	55.0
1968	87.8	89.4	78.9	78.8	89.9	88.1	50.4	51.1	87.8	89.0	57.4	57.1	57.5	57.5
1969	87.8	89.0	81.1	80.9	92.3	90.9	53.9	54.4	89.1	90.0	61.4	61.2	60.4	60.4
1970	88.4	89.3	80.3	80.0	90.8	89.7	57.8	58.2	90.2	90.8	65.4	65.2	63.2	63.4
1971	91.3	91.9	82.5	82.2	90.4	89.4	61.6	62.0	92.1	92.8	67.4	67.4	66.4	66.6
1972	94.1	94.7	87.7	87.5	93.2	92.3	65.5	66.0	94.9	95.7	69.6	69.7	69.0	69.0
1973	95.9	96.4	92.9	92.9	96.9	96.3	70.9	71.2	96.7	97.1	73.9	73.9	73.4	72.3
1974	93.9	94.3	91.3	91.2	97.3	96.7	77.6	78.0	95.4	95.9	82.7	82.7	80.5	79.7
1975	95.7	96.0	89.4	89.1	93.4	92.8	85.2	85.6	95.9	96.4	89.0	89.2	88.7	88.3
1976	98.3	98.5	94.5	94.4	96.1	95.9	92.8	92.8	98.7	98.8	94.3	94.3	94.0	93.8
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	100.8	100.8	105.8	106.0	104.9	105.1	108.5	108.6	100.8	100.9	107.6	107.7	107.3	107.0
1979	99.6	99.3	107.9	107.9	108.3	108.7	119.1	118.9	99.4	99.2	119.5	119.7	117.0	116.5
1980	99.3	98.8	106.7	106.7	107.5	108.0	131.5	131.3	96.7	96.6	132.5	132.9	127.6	127.8
1981	100.7	99.8	108.9	108.5	108.2	108.7	143.7	143.6	95.7	95.7	142.7	144.0	139.8	140.3
1982	100.3	99.2	105.5	104.9	105.2	105.7	154.9	154.8	97.3	97.2	154.5	156.0	148.1	149.2
1983	103.0	102.5	109.9	110.1	106.7	107.5	161.5	161.5	98.2	98.2	156.7	157.6	153.0	154.3
1984	105.6	104.6	119.2	119.2	112.9	114.0	168.0	167.8	98.0	97.9	159.1	160.4	158.2	159.0
1985	107.5	105.8	123.9	123.6	115.2	116.8	175.9	175.2	99.1	98.7	163.6	165.6	162.4	164.1
1986	109.5	107.5	128.0	127.5	116.9	118.6	182.8	182.0	101.0	100.6	166.9	169.3	165.8	167.8
1987 p	110.5	108.4	132.3	131.9	119.7	121.6	188.2	187.1	100.3	99.8	170.2	172.6	170.0	171.8
1982: IV	101.0	99.7	105.0	104.2	103.9	104.5	158.3	158.2	98.0	97.9	156.8	158.7	150.2	151.4
1983: IV	103.7	103.3	113.6	114.1	109.4	110.4	163.6	163.4	98.0	97.9	157.7	158.2	155.2	156.2
1984: IV	105.9	104.8	120.8	120.7	114.0	115.2	170.3	170.2	98.1	98.0	160.8	162.4	159.8	161.0
1985: I	106.5	105.2	122.2	122.0	114.7	115.9	172.4	172.2	98.5	98.4	161.9	163.6	160.8	162.2
II	107.2	105.7	123.3	123.1	115.0	116.4	174.6	174.1	98.6	98.3	162.8	164.7	162.0	163.6
III	111.3	109.1	133.1	132.7	119.6	121.7	189.1	187.9	100.3	99.6	169.8	172.2	170.7	172.5
IV	111.1	109.0	134.7	134.4	121.2	123.2	190.5	189.5	100.2	99.6	171.4	173.8	171.3	173.1
1986: I	109.5	107.7	127.3	126.9	116.3	117.9	180.7	180.0	100.1	99.7	165.0	167.2	164.3	166.4
II	109.7	107.7	127.5	127.1	116.3	118.0	182.2	181.3	101.3	100.8	166.2	168.4	165.4	167.3
III	109.6	107.5	128.1	127.6	116.9	118.7	183.6	182.6	101.4	100.9	167.5	169.8	166.9	168.8
IV	109.6	107.5	129.0	128.5	117.8	119.6	185.2	184.4	101.6	101.2	169.0	171.5	166.7	168.8
1987: I	109.7	107.6	130.2	129.7	118.7	120.6	185.8	184.9	100.7	100.2	169.4	171.8	168.2	170.3
II	110.1	108.0	131.1	130.7	119.1	121.1	187.3	186.3	100.3	99.7	170.2	172.5	169.6	171.4
III	111.3	109.1	133.1	132.7	119.6	121.7	189.1	187.9	100.3	99.6	169.8	172.2	170.7	172.5
IV p	111.1	109.0	134.7	134.4	121.2	123.2	190.5	189.5	100.2	99.6	171.4	173.8	171.3	173.1

---

[1] Output refers to gross domestic product originating in the sector in 1982 dollars.

[2] Hours of all persons engaged in the sector, including hours of proprietors and unpaid family workers. Estimates based primarily on establishment data.

[3] Wages and salaries of employees plus employers' contributions for social insurance and private benefit plans. Also includes an estimate of wages, salaries, and supplemental payments for the self-employed.

[4] Hourly compensation divided by the consumer price index for all urban consumers.

[5] Current dollar gross domestic product divided by constant dollar gross domestic product.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–47.—*Changes in productivity and related data, business sector, 1948–87*

[Percent change from preceding period; quarterly data at seasonally adjusted annual rates]

Year or quarter	Output per hour of all persons		Output[1]		Hours of all persons[2]		Compensation per hour[3]		Real compensation per hour[4]		Unit labor costs		Implicit price deflator[5]	
	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector	Business sector	Nonfarm business sector
1948	5.0	3.8	5.9	5.6	0.8	1.7	8.5	8.5	0.7	0.8	3.3	4.6	7.2	7.2
1949	1.1	1.7	−2.3	−2.3	−3.4	−3.9	1.7	3.0	2.7	4.0	.6	1.3	−.6	1.3
1950	8.3	6.4	9.5	9.7	1.1	3.0	7.3	6.1	6.3	5.1	−.9	−.3	1.5	1.8
1951	4.0	3.0	7.1	7.7	2.9	4.6	9.8	8.7	1.7	.7	5.6	5.6	6.3	5.6
1952	3.1	2.2	3.2	3.2	.1	1.0	6.3	5.6	4.0	3.3	3.1	3.3	1.3	2.0
1953	3.6	2.2	4.6	4.6	.9	2.4	6.7	5.7	5.9	4.9	3.0	3.5	.7	1.8
1954	1.6	1.5	−1.8	−2.0	−3.4	−3.4	3.2	3.3	2.8	2.8	1.6	1.8	1.2	1.5
1955	3.0	2.9	6.9	7.1	3.7	4.0	2.5	3.6	2.9	4.0	−.5	.7	2.6	3.2
1956	1.3	.6	2.8	3.1	1.5	2.5	6.7	6.2	5.1	4.6	5.3	5.5	3.2	3.3
1957	2.6	1.9	1.1	1.3	−1.5	−.6	6.5	5.7	3.0	2.2	3.8	3.8	3.5	3.6
1958	3.0	2.4	−1.8	−2.0	−4.7	−4.3	4.6	4.1	1.8	1.3	1.6	1.6	1.6	1.2
1959	3.3	3.2	7.3	7.7	3.8	4.3	4.4	4.1	3.5	3.3	1.0	.9	2.0	2.5
1960	1.7	1.1	1.8	1.7	.1	.6	4.3	4.4	2.7	2.8	2.6	3.3	1.4	1.4
1961	3.5	3.1	1.9	2.0	−1.6	−1.1	3.9	3.3	2.8	2.2	.3	.1	.5	.6
1962	3.6	3.3	5.2	5.5	1.6	2.1	4.7	4.1	3.5	2.9	1.1	.8	1.9	2.0
1963	4.0	3.6	4.6	4.7	.6	1.1	3.8	3.5	2.5	2.3	−.2	−.1	.9	.9
1964	4.3	3.9	6.0	6.3	1.6	2.3	5.2	4.6	3.8	3.3	.8	.7	1.0	1.2
1965	3.0	2.5	6.3	6.4	3.2	3.8	3.8	3.4	2.1	1.7	.9	.8	2.3	2.0
1966	2.8	2.1	5.2	5.6	2.4	3.4	6.9	5.9	3.9	2.9	4.1	3.7	3.3	3.1
1967	2.7	2.3	2.7	2.5	−.0	.3	5.4	5.5	2.5	2.6	2.6	3.2	2.5	2.9
1968	2.7	2.6	4.4	4.7	1.7	2.0	7.9	7.6	3.5	3.2	5.0	4.8	4.6	4.6
1969	.1	−.5	2.7	2.7	2.6	3.2	7.0	6.6	1.6	1.1	6.9	7.1	5.1	5.0
1970	.7	.3	−.9	−1.1	−1.6	−1.3	7.3	7.0	1.2	.9	6.5	6.7	4.7	4.9
1971	3.2	3.0	2.7	2.7	−.5	−.3	6.4	6.5	2.1	2.1	3.1	3.4	4.9	5.0
1972	3.0	3.1	6.3	6.4	3.1	3.3	6.4	6.5	3.0	3.1	3.3	3.4	4.0	3.6
1973	2.0	1.8	6.0	6.2	3.9	4.3	8.3	7.9	1.9	1.5	6.2	6.0	6.4	4.8
1974	−2.1	−2.2	−1.8	−1.8	.4	.4	9.5	9.6	−1.3	−1.3	11.9	12.0	9.6	10.2
1975	2.0	1.8	−2.1	−2.3	−4.0	−4.0	9.7	9.7	.5	.5	7.6	7.8	10.3	10.8
1976	2.8	2.6	5.8	6.0	2.9	3.4	8.9	8.4	2.9	2.5	5.9	5.7	5.9	6.3
1977	1.7	1.6	5.8	5.9	4.0	4.3	7.8	7.7	1.3	1.2	6.0	6.1	6.4	6.6
1978	.8	.8	5.8	6.0	4.9	5.1	8.5	8.6	.8	.9	7.6	7.7	7.3	7.0
1979	−1.2	−1.6	2.0	1.9	3.2	3.5	9.7	9.5	−1.4	−1.6	11.1	11.2	9.0	8.9
1980	−.3	−.4	−1.1	−1.2	−.8	−.7	10.5	10.5	−2.7	−2.7	10.9	11.0	9.0	9.7
1981	1.4	1.0	2.1	1.7	.7	.7	9.2	9.4	−1.0	−.9	7.7	8.3	9.6	9.7
1982	−.4	−.6	−3.1	−3.3	−2.8	−2.7	7.8	7.8	1.6	1.5	8.3	8.4	5.9	6.3
1983	2.7	3.3	4.2	5.0	1.5	1.6	4.2	4.3	1.0	1.1	1.4	1.0	3.3	3.5
1984	2.5	2.1	8.4	8.3	5.7	6.0	4.1	3.9	−.2	−.3	1.5	1.8	3.3	3.0
1985	1.8	1.2	4.0	3.6	2.1	2.5	4.7	4.4	1.1	.8	2.8	3.2	2.7	3.2
1986	1.9	1.6	3.3	3.2	1.4	1.6	3.9	3.9	2.0	1.9	2.0	2.2	2.1	2.3
1987 p	.9	.8	3.4	3.4	2.4	2.6	2.9	2.8	−.7	−.8	2.0	2.0	2.5	2.4
1982: IV	3.0	2.4	−.5	−1.2	−3.4	−3.5	4.5	5.0	3.2	3.7	1.5	2.6	2.4	3.0
1983: IV	3.0	1.4	10.4	9.8	7.2	8.3	5.4	4.3	1.5	.4	2.4	2.9	4.8	3.1
1984: IV	1.5	1.0	3.5	3.1	2.1	2.1	3.8	3.9	.4	.6	2.3	2.9	2.7	3.3
1985: I	2.2	1.5	4.8	4.3	2.5	2.8	5.1	4.8	1.7	1.4	2.8	3.2	2.5	3.0
II	2.9	1.7	3.8	3.4	1.0	1.7	5.1	4.5	.6	−.1	2.2	2.7	3.0	3.5
III	3.7	2.6	4.4	4.1	.7	1.5	5.7	4.9	3.3	2.5	1.9	2.2	2.5	3.2
IV	−1.0	−1.6	2.2	2.0	3.2	3.6	5.1	4.9	1.2	.9	6.2	6.6	2.5	2.0
1986: I	5.8	6.6	6.4	6.4	.5	−.2	3.2	3.9	1.6	2.3	−2.5	−2.6	.9	1.6
II	.6	.1	.7	.6	.1	.6	3.5	2.9	4.8	4.2	2.8	2.8	2.6	2.3
III	−.3	−.6	1.8	1.7	2.1	2.3	3.0	2.8	.5	.4	3.3	3.5	3.7	3.7
IV	−.1	.0	3.0	2.9	3.1	2.9	3.6	4.0	.9	1.3	3.7	4.0	−.5	.0
1987: I	.5	.4	3.5	3.8	3.0	3.4	1.4	1.1	−3.7	−3.9	.9	.8	3.7	3.4
II	1.4	1.4	3.0	3.2	1.6	1.7	3.3	3.0	−1.6	−1.8	1.8	1.5	3.4	2.6
III	4.7	4.2	6.3	6.3	1.5	2.0	3.8	3.6	−.1	−.3	−.9	−.6	2.5	2.7
IV p	−.7	−.2	4.8	5.1	5.6	5.3	3.1	3.4	−.5	−.1	3.9	3.7	1.6	1.5

[1] Output refers to gross domestic product originating in the sector in 1982 dollars.

[2] Hours of all persons engaged in the sector, including hours of proprietors and unpaid family workers. Estimates based primarily on establishment data.

[3] Wages and salaries of employees plus employers' contributions for social insurance and private benefit plans. Also includes an estimate of wages, salaries, and supplemental payments for the self-employed.

[4] Hourly compensation divided by the consumer price index for all urban consumers.

[5] Current dollar gross domestic product divided by constant dollar gross domestic product.

Note.—Data relate to all persons engaged in the sector. Percent changes are based on original data and therefore may differ slightly from percent changes based on indexes in Table B–46.

Source: Department of Labor, Bureau of Labor Statistics.

Table B–48.—*Industrial production indexes, major industry divisions, 1939–87*

[1977 = 100; monthly data seasonally adjusted]

Year or month	Total industrial production	Manufacturing			Mining	Utilities
		Total	Durable	Nondurable		
1977 proportion	100.00	84.21	49.10	35.11	9.83	5.96
1939	16.0	15.8	13.6	17.9	37.6	6.9
1940	18.4	18.6	18.1	18.8	41.8	7.6
1941	23.3	23.8	24.2	22.7	44.4	8.6
1942	26.7	27.7	30.7	23.7	45.7	9.7
1943	32.4	34.5	41.8	25.4	46.8	10.7
1944	34.9	37.3	46.1	26.4	50.2	11.4
1945	29.9	31.2	34.9	26.3	49.2	11.6
1946	25.8	25.9	24.4	27.1	48.3	12.0
1947	29.0	28.9	29.0	28.2	54.6	13.0
1948	30.2	30.0	30.3	29.2	57.4	14.5
1949	28.6	28.3	27.5	28.7	50.9	15.5
1950	33.1	33.0	33.5	31.9	56.9	17.6
1951	35.9	35.6	37.7	33.0	62.4	20.1
1952	37.2	37.1	40.0	33.6	61.9	21.8
1953	40.4	40.4	45.2	35.0	63.5	23.6
1954	38.2	37.8	39.9	35.2	62.3	25.4
1955	43.0	42.6	45.6	39.1	69.5	28.4
1956	44.9	44.4	47.1	41.1	73.1	31.2
1957	45.5	44.9	47.4	41.8	73.2	33.3
1958	42.6	41.7	41.5	42.1	67.1	34.9
1959	47.7	47.0	47.7	46.3	70.2	38.4
1960	48.8	48.0	48.5	47.4	71.6	41.1
1961	49.1	48.1	47.6	48.8	72.1	43.4
1962	53.2	52.4	52.8	51.8	74.1	46.6
1963	56.3	55.5	56.3	54.6	77.1	49.8
1964	60.1	59.3	60.3	58.2	80.2	54.1
1965	66.1	65.7	68.6	62.1	83.1	57.4
1966	72.0	71.7	76.2	66.0	87.6	61.8
1967	73.5	73.1	77.0	68.1	89.3	64.9
1968	77.6	77.2	80.8	72.5	92.7	70.2
1969	81.2	80.6	84.0	76.3	96.4	76.4
1970	78.5	77.0	77.6	76.3	98.9	81.1
1971	79.6	78.2	77.3	79.4	96.4	85.0
1972	87.3	86.4	86.3	86.5	98.4	90.4
1973	94.4	94.0	96.3	90.8	99.3	94.0
1974	93.0	92.6	94.3	90.2	98.8	92.8
1975	84.8	83.4	82.6	84.5	96.6	93.7
1976	92.6	91.9	91.1	93.1	97.4	97.4
1977	100.0	100.0	100.0	100.0	100.0	100.0
1978	106.5	107.1	108.2	105.5	103.6	103.1
1979	110.7	111.5	113.9	108.2	106.4	105.9
1980	108.6	108.2	109.1	107.0	112.4	107.3
1981	111.0	110.5	111.1	109.7	117.5	107.1
1982	103.1	102.2	99.9	105.5	109.3	104.8
1983	109.2	110.2	107.7	113.7	102.9	105.2
1984	121.4	123.4	124.2	122.3	111.1	110.7
1985	123.7	126.4	127.6	124.6	108.9	111.1
1986	125.1	129.1	128.4	130.1	100.4	108.5
1987 ᵖ	129.8	134.6	133.1	136.7	100.4	110.3
1986: Jan	126.4	129.3	129.8	128.6	110.0	111.5
Feb	125.5	128.6	128.9	128.2	107.6	109.9
Mar	123.9	127.4	127.4	127.3	105.2	107.9
Apr	124.7	128.7	128.5	128.9	102.1	108.1
May	124.3	128.5	127.7	129.7	100.5	106.1
June	124.1	128.3	126.9	130.2	98.2	106.9
July	124.8	129.2	128.1	130.6	97.8	108.6
Aug	124.9	129.2	127.9	131.1	96.9	107.0
Sept	124.5	129.2	128.4	130.3	95.8	106.2
Oct	125.3	129.7	128.6	131.2	96.2	108.6
Nov	125.7	130.1	129.0	131.7	97.5	109.6
Dec	126.8	131.3	129.7	133.4	97.1	109.0
1987: Jan	126.2	130.7	129.3	132.7	99.4	108.0
Feb	127.1	131.6	130.8	132.9	98.8	108.5
Mar	127.4	132.4	131.5	133.7	98.3	107.9
Apr	127.4	132.4	130.9	134.6	98.6	106.0
May	128.2	133.2	131.4	135.7	99.2	109.6
June	129.1	134.0	132.0	136.9	99.2	109.4
July	130.6	135.6	133.5	138.5	99.2	111.2
Aug	131.2	135.9	133.8	138.8	100.9	112.9
Sept	131.0	135.7	133.7	138.6	101.9	111.2
Oct	132.5	137.4	136.7	138.3	103.2	112.1
Nov ᵖ	133.1	138.0	137.0	139.5	103.0	112.9
Dec ᵖ	133.3	138.3	136.8	140.3	103.3	112.4

Source: Board of Governors of the Federal Reserve System.

TABLE B–49.—*Industrial production indexes, market groupings, 1947–87*

[1977=100; monthly data seasonally adjusted]

Year or month	Total industrial production	Final products								Intermediate products	Materials		
		Total	Consumer goods			Equipment					Total [3]	Durable goods	Nondurable goods
			Total [1]	Automotive products	Home goods	Total [2]	Business	Defense and space					
1977 proportion	100.00	44.77	25.52	2.98	3.91	19.25	14.34	3.67		12.94	42.28	20.50	10.09
1947	29.0	29.0	29.9	25.8	26.1	25.5	25.9	15.2		29.9	28.8	28.5	
1948	30.2	30.1	30.8	27.0	27.2	26.8	27.0	17.8		31.6	30.0	29.3	
1949	28.6	29.1	30.6	26.7	25.2	24.0	23.6	18.6		29.9	27.3	26.3	
1950	33.1	32.9	35.0	33.6	34.7	26.0	25.2	21.9		34.8	32.7	33.1	
1951	35.9	35.5	34.6	29.8	29.9	36.1	30.8	53.8		36.5	36.2	37.6	
1952	37.2	38.1	35.4	26.8	29.9	43.3	34.9	75.7		36.3	36.7	38.4	
1953	40.4	40.7	37.5	33.9	33.9	47.0	36.3	90.6		38.8	40.8	44.9	
1954	38.2	38.5	37.3	31.5	31.3	41.1	31.9	79.8		38.7	37.7	38.7	29.1
1955	43.0	41.6	41.6	41.9	36.9	42.0	34.6	73.1		43.9	44.6	47.4	33.3
1956	44.9	44.1	43.1	34.5	38.8	46.1	40.1	71.4		45.9	45.7	47.6	34.8
1957	45.5	45.4	44.2	36.1	38.0	48.0	41.7	74.6		45.9	45.7	47.5	34.7
1958	42.6	43.3	43.8	28.7	35.8	42.9	35.2	74.9		44.9	41.1	40.0	34.5
1959	47.7	47.5	48.0	36.0	41.1	47.2	39.5	78.9		49.6	47.4	47.7	39.4
1960	48.8	49.1	49.8	41.2	41.4	48.4	40.6	81.1		49.9	48.1	48.3	40.1
1961	49.1	49.5	50.9	37.6	42.7	47.8	39.4	82.4		50.9	48.1	47.1	41.7
1962	53.2	53.7	54.3	45.6	46.4	53.2	42.8	95.4		54.0	52.4	52.4	45.2
1963	56.3	56.7	57.3	49.9	50.0	56.3	44.9	102.9		57.0	55.8	55.9	47.9
1964	60.1	59.9	60.5	52.3	54.6	59.6	50.3	99.6		60.7	60.3	60.9	52.1
1965	66.1	65.8	65.3	64.4	61.9	67.3	57.6	110.3		64.6	67.2	69.8	57.2
1966	72.0	72.1	68.6	64.2	68.2	78.4	66.7	129.6		68.6	73.2	76.9	61.8
1967	73.5	75.0	70.3	56.4	69.1	83.4	68.0	147.8		71.4	72.5	74.2	62.9
1968	77.6	78.6	74.5	67.2	74.0	85.8	71.0	148.1		75.5	77.3	78.6	69.1
1969	81.2	81.1	77.3	67.5	78.9	88.1	75.6	141.0		79.6	81.9	82.7	74.8
1970	78.5	78.2	76.4	56.8	76.5	81.8	72.9	119.4		78.4	79.0	75.1	75.2
1971	79.6	78.9	80.8	72.4	81.0	76.6	69.3	107.3		80.8	80.2	75.4	78.4
1972	87.3	85.6	87.3	78.1	92.7	83.8	79.0	104.3		90.2	88.4	85.2	86.4
1973	94.4	92.0	91.2	86.2	98.1	93.6	92.4	101.9		96.0	96.8	97.4	92.7
1974	93.0	91.7	88.4	74.5	90.7	96.6	96.5	100.4		92.6	94.8	94.6	93.2
1975	84.8	86.3	84.9	70.2	79.9	88.5	86.1	98.5		83.6	83.2	78.8	82.9
1976	92.6	92.4	93.3	87.1	89.5	91.5	89.3	100.1		92.1	93.0	90.8	93.9
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		100.0	100.0	100.0	100.0
1978	106.5	106.9	104.3	102.4	104.7	110.3	112.2	101.2		106.9	105.9	108.8	105.6
1979	110.7	111.0	103.9	94.9	103.7	120.4	124.7	105.6		110.8	110.3	114.4	109.3
1980	108.6	112.2	102.7	76.1	97.7	124.7	125.1	115.4		106.9	105.3	106.1	103.4
1981	111.0	115.2	104.1	78.8	98.1	129.9	127.6	119.8		107.3	107.7	109.7	107.1
1982	103.1	109.5	101.4	78.1	86.5	120.2	113.6	133.0		101.7	96.7	94.2	96.6
1983	109.2	114.7	109.3	95.1	101.1	121.7	115.4	143.1		111.2	102.8	103.7	106.2
1984	121.4	127.3	118.0	109.4	114.3	139.6	134.2	156.4		124.7	114.2	121.5	111.4
1985	123.7	131.0	119.8	114.1	111.2	145.8	140.2	171.4		129.3	114.3	121.7	112.1
1986	125.1	132.5	124.0	115.3	115.8	143.6	139.5	182.0		136.2	113.8	120.0	117.5
1987 [p]	129.8	136.8	127.8	118.5	122.0	148.8	144.4	189.2		143.4	118.1	124.8	125.6
1986: Jan	126.4	134.0	123.6	114.5	115.8	147.7	142.1	178.9		134.2	115.9	122.4	116.0
Feb	125.5	132.9	122.9	116.2	114.2	146.1	141.3	178.0		134.2	115.0	121.3	115.7
Mar	123.9	131.0	121.4	110.8	111.6	143.7	139.2	178.6		134.0	113.2	119.4	113.9
Apr	124.7	132.2	123.8	115.9	113.4	143.3	139.6	179.8		134.9	113.7	120.1	116.3
May	124.3	131.7	123.8	114.6	113.5	142.1	138.6	180.2		135.1	113.2	119.4	116.1
June	124.1	131.0	123.7	114.7	114.0	140.8	137.2	180.7		136.3	113.0	118.7	117.3
July	124.8	132.3	124.5	116.6	115.4	142.7	139.4	182.4		137.1	113.2	119.1	117.3
Aug	124.9	132.7	125.0	115.8	116.5	142.8	139.1	183.7		136.8	113.1	118.9	118.5
Sept	124.5	132.1	123.6	118.4	116.7	143.4	139.6	184.6		136.4	112.9	118.9	119.0
Oct	125.3	132.9	124.8	115.7	117.6	143.7	139.4	185.6		138.3	113.3	119.7	119.3
Nov	125.7	132.9	125.0	114.9	119.3	143.4	138.8	185.5		138.1	114.3	120.6	119.2
Dec	126.8	134.1	126.6	115.3	122.6	144.0	139.5	186.2		139.2	115.2	121.6	122.5
1987: Jan	126.2	133.3	125.5	116.6	120.5	143.5	138.6	187.3		138.8	114.9	120.5	121.4
Feb	127.1	134.8	126.4	122.6	119.8	146.0	141.7	188.9		139.9	114.9	121.3	120.8
Mar	127.4	135.1	126.7	121.6	118.4	146.2	141.9	188.6		140.9	115.2	122.3	121.5
Apr	127.4	134.5	125.5	115.0	118.1	146.4	142.1	189.2		140.3	115.9	122.2	124.1
May	128.2	135.5	127.3	118.8	121.2	146.3	141.7	189.3		141.8	116.3	122.6	123.9
June	129.1	136.2	127.2	114.9	119.3	148.1	144.2	188.6		143.3	117.2	124.0	124.1
July	130.6	137.9	128.9	117.5	122.5	149.7	145.6	188.7		145.0	118.5	125.2	127.6
Aug	131.2	138.4	129.4	118.0	123.6	150.2	145.6	189.1		145.3	119.4	125.5	128.3
Sept	131.0	137.8	127.7	114.2	121.9	151.2	146.3	189.8		144.9	119.7	126.4	128.6
Oct	132.5	139.5	129.3	124.3	124.6	153.1	148.7	190.2		146.0	121.0	128.7	128.2
Nov [p]	133.1	139.5	129.5	121.3	126.9	152.8	148.7	190.0		146.9	122.0	129.7	129.3
Dec [p]	133.3	139.4	129.7	115.8	128.7	152.4	148.2	191.1		147.5	122.5	130.5	130.3

[1] Includes clothing and consumer staples, not shown separately.
[2] Two components—oil and gas well drilling and manufactured homes—are included in total equipment, but not in detail shown.
[3] Includes energy materials, not shown separately.

Source: Board of Governors of the Federal Reserve System.

Table B–50.—*Industrial production indexes, selected manufactures, 1947–87*

[1977=100; monthly data seasonally adjusted]

Year or month	Durable manufactures								Nondurable manufactures				
	Primary metals		Fabricated metal products	Nonelectrical machinery	Electrical machinery	Transportation equipment		Lumber and products	Apparel products	Textile mill products	Printing and publishing	Chemicals and products	Foods
	Total	Iron and steel				Total	Motor vehicles and parts						
1977 proportion	5.33	3.49	6.46	9.54	7.15	9.13	5.25	2.30	2.79	2.29	4.54	8.05	7.96
1947	57.8	70.4	40.4	26.7	14.5	26.6	28.8	47.2	47.0	38.5	34.3	10.4	41.9
1948	60.1	73.6	41.2	26.8	15.1	29.0	31.2	49.1	49.1	41.1	36.0	11.3	41.5
1949	50.5	62.9	37.2	22.9	14.1	29.2	32.0	43.3	48.6	38.0	37.0	11.1	41.9
1950	63.6	77.5	45.5	25.7	19.4	34.9	41.2	52.7	52.3	43.2	38.8	13.9	43.4
1951	69.2	86.6	48.6	32.6	19.5	38.9	37.8	52.5	51.3	42.8	39.5	15.7	44.3
1952	63.2	76.2	47.4	35.5	22.3	45.2	32.4	51.8	54.0	42.4	39.4	16.5	45.2
1953	71.6	87.9	53.5	36.9	25.6	56.8	40.8	54.8	54.7	43.5	41.2	17.8	46.1
1954	57.9	68.3	48.2	31.6	22.8	49.4	35.1	54.5	54.1	40.7	42.9	18.1	47.0
1955	75.3	90.8	55.0	34.6	26.1	56.8	47.1	60.8	59.7	46.4	47.2	21.1	49.8
1956	74.8	89.1	55.8	39.7	28.3	55.1	38.2	60.1	61.1	47.7	50.2	22.6	52.6
1957	71.6	85.9	57.2	39.6	28.1	59.0	40.1	55.2	60.9	45.5	51.9	23.9	53.4
1958	56.8	64.7	51.3	33.2	25.7	46.5	29.6	56.0	59.2	44.8	50.7	24.7	54.7
1959	66.4	74.5	57.6	38.8	31.2	52.7	38.5	63.6	65.2	50.7	54.1	28.8	57.4
1960	66.1	75.7	57.6	39.0	33.8	54.6	43.4	59.8	66.5	49.8	56.3	29.9	59.0
1961	64.9	72.3	56.2	37.9	35.9	51.3	38.1	62.6	66.9	51.2	56.5	31.4	60.7
1962	69.6	75.3	61.1	42.5	41.3	59.3	46.3	66.1	69.6	54.7	58.6	34.8	62.6
1963	75.1	82.1	63.1	45.4	42.4	65.1	51.3	69.2	72.5	56.7	61.7	38.1	64.9
1964	84.7	93.4	67.0	51.7	44.9	66.8	52.7	74.3	75.0	61.2	65.5	41.7	67.8
1965	93.2	102.4	73.6	58.2	53.5	79.4	67.3	77.2	79.3	66.6	69.7	46.5	69.4
1966	98.9	105.5	78.8	67.6	64.2	85.1	66.2	80.1	81.3	70.7	75.0	50.7	72.0
1967	91.4	97.5	82.5	68.9	64.5	83.2	58.2	79.3	80.9	70.7	79.1	53.0	75.2
1968	94.7	100.7	86.9	69.5	68.1	90.4	69.7	81.6	82.9	78.9	80.4	59.6	77.2
1969	101.9	109.7	88.4	75.2	72.5	89.7	70.0	81.5	85.6	83.0	84.3	64.5	79.8
1970	94.8	102.1	81.9	72.8	69.3	75.3	56.3	81.1	82.2	81.2	82.0	67.1	81.0
1971	89.9	93.4	81.5	67.6	69.6	81.5	70.6	83.2	83.2	85.7	82.7	71.4	83.6
1972	100.7	103.8	89.4	78.5	79.7	87.0	77.1	95.3	88.3	93.9	88.2	80.3	88.0
1973	114.3	118.2	99.4	91.7	90.7	99.1	89.8	95.6	89.0	97.8	90.6	87.8	89.8
1974	110.7	114.5	95.4	97.7	89.8	90.1	77.5	86.8	85.0	89.0	89.2	91.0	91.0
1975	88.2	92.0	82.7	84.5	77.2	81.0	65.7	80.8	77.6	84.8	83.5	82.9	90.4
1976	98.7	101.4	91.6	88.8	86.8	92.2	86.5	91.9	91.5	94.2	91.2	92.8	95.6
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	107.0	107.5	105.7	111.7	112.9	106.3	104.6	102.4	103.1	102.8	107.8	106.8	104.3
1979	108.5	108.0	109.4	122.6	125.7	108.3	95.9	102.0	98.3	104.4	112.7	111.4	106.7
1980	90.4	86.3	101.8	123.3	130.3	96.9	71.1	92.9	97.3	100.8	115.1	106.4	111.4
1981	95.0	92.5	101.6	129.8	134.1	95.1	71.6	90.1	96.1	98.1	118.6	112.6	113.7
1982	65.8	57.5	86.6	115.6	128.4	87.6	66.8	82.8	87.3	89.2	120.2	103.8	114.9
1983	73.0	66.1	89.1	118.3	143.8	99.2	85.8	100.2	95.3	100.9	129.8	114.0	120.4
1984	82.3	73.4	102.6	141.8	170.5	112.2	104.4	109.1	102.7	104.2	146.5	121.6	126.9
1985	80.4	70.4	107.1	146.2	168.3	122.8	111.9	114.3	100.4	102.2	151.4	126.4	130.5
1986	75.1	63.4	108.0	145.0	165.7	127.5	111.5	124.1	103.1	109.2	160.9	132.0	134.4
1987 ᵖ	81.4	....	110.8	152.3	172.5	129.2	111.8	....	....	....	172.1	....	....
1986:													
Jan	80.7	70.8	109.3	147.9	165.4	128.5	114.1	122.0	103.4	106.4	158.0	130.7	132.9
Feb	78.8	68.2	108.5	146.5	163.4	128.7	115.1	121.2	102.2	107.9	155.5	130.4	133.7
Mar	76.3	64.9	107.3	145.1	162.6	125.2	109.0	121.1	102.0	105.3	155.9	128.8	133.1
Apr	76.5	64.9	108.9	143.8	164.5	128.1	113.0	123.2	102.4	108.6	159.1	131.0	134.4
May	75.1	62.1	107.0	143.6	165.0	127.0	110.7	123.1	102.5	108.2	160.0	132.2	134.4
June	72.5	60.5	107.2	143.6	161.9	127.5	112.1	121.5	102.7	108.8	161.5	132.1	134.8
July	73.6	62.5	106.7	145.6	166.6	127.2	111.4	122.5	103.5	108.6	161.4	132.8	134.5
Aug	72.6	60.3	106.9	145.0	166.6	126.9	109.6	123.6	103.2	110.7	161.7	132.6	135.3
Sept	72.8	60.2	107.8	144.9	166.5	128.9	113.0	123.8	102.6	110.6	161.7	132.2	134.4
Oct	73.1	61.0	108.9	145.0	167.3	127.6	110.3	124.6	103.9	110.2	164.4	133.3	133.7
Nov	75.5	63.5	108.3	144.5	167.9	126.9	109.1	130.3	103.8	112.2	164.8	132.3	135.3
Dec	73.4	61.3	109.6	144.8	170.4	126.8	109.7	133.5	104.9	113.4	166.4	135.7	136.7
1987:													
Jan	72.8	59.5	108.4	143.4	170.4	129.0	112.0	128.5	106.1	109.2	166.3	136.4	134.6
Feb	75.1	62.3	108.3	145.5	171.0	132.7	117.7	129.6	106.5	110.8	164.4	135.7	136.4
Mar	77.0	65.4	110.5	148.5	168.5	132.2	116.5	128.9	105.4	112.6	167.6	135.3	137.3
Apr	76.1	65.0	109.9	150.4	168.4	127.8	109.8	127.8	105.3	116.6	169.2	137.3	136.0
May	77.0	65.7	108.5	149.7	171.1	129.4	112.0	130.3	106.4	115.7	171.4	138.1	137.4
June	78.8	68.3	111.1	151.8	170.5	126.5	107.4	131.1	107.7	117.2	174.1	139.3	137.7
July	81.4	70.9	111.1	155.3	172.5	127.6	109.4	132.8	109.7	118.3	174.0	140.8	138.5
Aug	85.1	76.0	110.1	154.3	174.3	128.1	109.1	131.1	108.4	119.8	174.7	142.3	138.8
Sept	84.5	74.6	111.1	156.6	173.4	125.5	105.6	126.9	107.6	118.2	174.9	142.4	139.5
Oct	90.5	82.0	113.1	158.0	175.5	131.8	116.0	129.4	108.0	117.3	175.2	141.8	138.4
Nov ᵖ	91.3	81.8	113.5	157.6	176.4	130.6	114.0	134.0	....	119.3	175.7	143.4	139.2
Dec ᵖ	90.6	....	114.0	156.5	177.6	128.6	110.4	....	....	....	176.4	....	....

Source: Board of Governors of the Federal Reserve System.

TABLE B-51.—*Capacity utilization rates, 1948–87*

[Percent; monthly data seasonally adjusted]

Year or month	Total industry	Manufacturing					Mining	Utilities	Industrial materials
		Total	Durable goods	Non-durable goods	Primary processing	Advanced processing			
1948	...	82.5	...	...	87.3	80.0	...	...	...
1949	...	74.2	...	...	76.2	73.2	...	...	...
1950	...	82.8	...	...	88.5	79.8	...	...	...
1951	...	85.8	...	...	90.2	83.4	...	...	...
1952	...	85.4	...	...	84.9	85.9	...	...	...
1953	...	89.3	...	...	89.4	89.3	...	...	...
1954	...	80.1	...	...	80.6	80.0	...	...	...
1955	...	87.0	...	...	92.0	84.2	...	...	...
1956	...	86.1	...	...	89.4	84.4	...	...	...
1957	...	83.6	...	...	84.7	83.1	...	...	...
1958	...	75.0	...	...	75.4	74.9	...	...	...
1959	...	81.6	...	...	83.0	81.1	...	...	...
1960	...	80.1	...	...	79.8	80.5	...	...	...
1961	...	77.3	...	...	77.9	77.2	...	...	...
1962	...	81.4	...	...	81.5	81.6	...	...	...
1963	...	83.5	...	...	83.8	83.4	...	...	...
1964	...	85.6	...	...	87.8	84.6	...	...	...
1965	...	89.5	...	...	91.0	88.8	...	...	...
1966	...	91.1	...	...	91.4	91.1	...	...	...
1967	87.1	86.7	87.0	86.7	85.3	87.6	82.9	93.2	85.1
1968	87.4	87.0	86.7	87.7	86.9	87.0	84.6	93.9	86.8
1969	87.4	86.7	86.1	88.0	87.7	86.1	87.0	95.6	88.1
1970	80.9	79.2	76.1	83.9	80.9	78.3	89.0	95.1	81.8
1971	79.0	77.4	73.3	83.5	79.5	76.1	87.3	93.7	80.4
1972	84.0	82.8	79.7	87.4	86.4	81.1	90.2	94.5	86.0
1973	87.9	87.0	86.2	88.1	91.3	85.1	91.4	92.8	91.1
1974	83.6	82.6	81.6	84.2	85.4	81.5	91.1	86.8	86.1
1975	74.1	72.3	69.6	76.3	72.2	72.6	89.2	84.3	73.4
1976	78.8	77.4	74.8	81.4	79.3	76.8	89.7	85.3	80.3
1977	82.4	81.4	79.4	84.5	83.1	80.5	89.9	85.1	84.1
1978	84.8	84.2	82.9	86.1	86.0	83.1	90.3	85.0	86.3
1979	85.2	84.6	84.1	85.3	86.6	83.5	90.7	85.6	87.1
1980	80.9	79.3	77.9	81.3	77.9	80.0	93.2	85.4	81.1
1981	79.9	78.2	76.7	80.6	78.1	78.3	92.9	84.2	81.2
1982	72.1	70.3	66.9	75.4	67.5	71.7	83.4	81.4	71.8
1983	74.6	73.9	70.3	79.4	73.9	74.0	77.9	80.0	75.3
1984	81.0	80.5	78.7	83.3	80.9	80.3	84.0	83.0	82.0
1985	80.4	80.1	78.5	82.4	80.9	79.7	82.4	82.3	80.3
1986	79.4	79.7	77.2	83.5	81.8	78.8	76.4	79.1	78.6
1987 ^{p}	80.7	81.0	78.4	84.9	84.6	79.4	77.6	79.5	80.4
1986: Jan	81.0	80.7	78.7	83.8	82.9	79.8	83.4	81.8	80.5
Feb	80.3	80.2	78.0	83.3	82.0	79.3	81.6	80.5	79.8
Mar	79.2	79.2	77.0	82.5	80.9	78.4	79.9	79.0	78.5
Apr	79.5	79.9	77.5	83.3	81.7	79.1	77.6	79.1	78.7
May	79.2	79.6	76.9	83.6	81.4	78.8	76.4	77.6	78.3
June	78.9	79.3	76.4	83.7	81.1	78.4	74.7	78.1	78.0
July	79.2	79.7	76.9	83.8	81.3	78.9	74.5	79.4	78.1
Aug	79.1	79.6	76.7	83.8	81.5	78.6	73.9	78.1	77.9
Sept	78.8	79.4	76.9	83.1	81.5	78.4	73.1	77.5	77.7
Oct	79.1	79.5	76.9	83.5	81.8	78.5	73.4	79.2	77.9
Nov	79.2	79.6	77.0	83.5	82.5	78.3	74.5	79.8	78.5
Dec	79.7	80.2	77.3	84.4	83.1	78.7	74.2	79.3	79.1
1987: Jan	79.2	79.6	76.9	83.7	82.7	78.2	76.1	78.5	78.7
Feb	79.7	80.0	77.6	83.6	82.4	79.0	75.8	78.8	78.7
Mar	79.7	80.3	77.9	83.9	83.1	79.1	75.5	78.2	78.7
Apr	79.6	80.2	77.5	84.2	83.5	78.7	75.9	76.8	79.1
May	79.9	80.4	77.6	84.6	83.2	79.2	76.5	79.2	79.3
June	80.3	80.8	77.8	85.2	84.0	79.2	76.6	79.0	79.8
July	81.1	81.5	78.6	85.9	85.4	79.8	76.8	80.2	80.6
Aug	81.4	81.5	78.6	85.8	85.3	79.9	78.2	81.3	81.1
Sept	81.1	81.3	78.4	85.5	85.1	79.5	79.1	80.0	81.2
Oct	81.9	82.1	80.0	85.0	86.1	80.2	80.2	80.5	82.0
Nov ^{p}	82.0	82.3	80.1	85.5	87.0	80.2	80.2	81.0	82.6
Dec ^{p}	82.1	82.2	79.8	85.8	87.4	80.0	80.6	80.5	82.8

Source: Board of Governors of the Federal Reserve System.

TABLE B-52.—*New construction activity, 1929–87*

[Value put in place, billions of dollars; monthly data at seasonally adjusted annual rates]

Year or month	Total new construction	Private construction							Public construction		
		Total	Residential buildings [1]		Nonresidential buildings and other construction [1]				Total	Federal	State and local [5]
			Total [2]	New housing units	Total	Commercial [3]	Industrial	Other [4]			
1929	10.8	8.3	3.6	3.0	4.7	1.1	0.9	2.6	2.5	0.2	2.3
1933	2.9	1.2	.5	.3	.8	.1	.2	.5	1.6	.5	1.1
1939	8.2	4.4	2.7	2.3	1.7	.3	.3	1.2	3.8	.8	3.1
1940	8.7	5.1	3.0	2.6	2.1	.3	.4	1.3	3.6	1.2	2.4
1941	12.0	6.2	3.5	3.0	2.7	.4	.8	1.5	5.8	3.8	2.0
1942	14.1	3.4	1.7	1.4	1.7	.2	.3	1.2	10.7	9.3	1.3
1943	8.3	2.0	.9	.7	1.1	.0	.2	.9	6.3	5.6	.7
1944	5.3	2.2	.8	.6	1.4	.1	.2	1.1	3.1	2.5	.6
1945	5.8	3.4	1.3	.7	2.1	.2	.6	1.3	2.4	1.7	.7
1946	14.3	12.1	6.2	4.8	5.8	1.2	1.7	3.0	2.2	.9	1.4
New series											
1947	20.0	16.7	9.9	7.8	6.9	1.0	1.7	4.2	3.3	.8	2.5
1948	26.1	21.4	13.1	10.5	8.2	1.4	1.4	5.5	4.7	1.2	3.5
1949	26.7	20.5	12.4	10.0	8.0	1.2	1.0	5.9	6.3	1.5	4.8
1950	33.6	26.7	18.1	15.6	8.6	1.4	1.1	6.1	6.9	1.6	5.2
1951	35.4	26.2	15.9	13.2	10.3	1.5	2.1	6.7	9.3	3.0	6.3
1952	36.8	26.0	15.8	12.9	10.2	1.1	2.3	6.8	10.8	4.2	6.6
1953	39.1	27.9	16.6	13.4	11.3	1.8	2.2	7.3	11.2	4.1	7.1
1954	41.4	29.7	18.2	14.9	11.5	2.2	2.0	7.2	11.7	3.4	8.3
1955	46.5	34.8	21.9	18.2	12.9	3.2	2.4	7.3	11.7	2.8	8.9
1956	47.6	34.9	20.2	16.1	14.7	3.6	3.1	8.0	12.7	2.7	10.0
1957	49.1	35.1	19.0	14.7	16.1	3.6	3.6	9.0	14.1	3.0	11.1
1958	50.0	34.6	19.8	15.4	14.8	3.6	2.4	8.8	15.5	3.4	12.1
1959	55.4	39.3	24.3	19.2	15.1	3.9	2.1	9.0	16.1	3.7	12.3
1960	54.7	38.9	23.0	17.3	15.9	4.2	2.9	8.9	15.9	3.6	12.2
1961	56.4	39.3	23.1	17.1	16.2	4.7	2.8	8.7	17.1	3.9	13.3
1962	60.2	42.3	25.2	19.4	17.2	5.1	2.8	9.2	17.9	3.9	14.0
1963	64.8	45.5	27.9	21.7	17.6	5.0	2.9	9.7	19.4	4.0	15.4
New series											
1964	72.6	52.4	30.5	24.1	21.8	6.8	3.6	11.5	20.2	3.7	16.5
1965	78.5	56.6	30.2	23.8	26.3	8.1	5.1	13.1	21.9	3.9	18.0
1966	81.8	58.0	28.6	21.8	29.4	8.1	6.6	14.7	23.8	3.8	20.0
1967	83.5	58.1	28.7	21.5	29.4	8.0	6.0	15.4	25.4	3.3	22.1
1968	93.2	65.7	34.2	26.7	31.6	9.0	6.0	16.6	27.4	3.2	24.2
1969	100.5	72.7	37.2	29.2	35.5	10.7	6.8	17.9	27.8	3.2	24.6
1970	101.3	73.4	35.9	27.1	37.5	11.1	6.5	19.9	27.9	3.1	24.8
1971	117.9	88.2	48.5	38.7	39.7	13.0	5.4	21.3	29.7	3.8	25.9
1972	133.9	103.9	60.7	50.1	43.2	15.4	4.7	23.1	30.0	4.2	25.8
1973	147.4	115.0	65.1	54.6	49.9	17.7	6.2	26.0	32.3	4.7	27.6
1974	147.8	109.6	56.0	43.4	53.7	17.6	7.9	28.2	38.1	5.1	33.0
1975	144.3	102.6	51.6	36.3	51.0	13.9	8.0	29.1	41.7	6.1	35.6
1976	163.0	122.1	68.3	50.8	53.8	13.7	7.2	33.0	40.9	6.8	34.1
1977	188.0	148.6	92.0	72.2	56.6	15.7	7.7	33.2	39.4	7.1	32.4
1978	225.9	178.4	109.8	85.6	68.6	19.7	11.0	37.9	47.5	8.1	39.3
1979	252.4	200.7	116.4	89.3	84.3	27.1	15.0	42.3	51.7	8.6	43.1
1980	251.7	193.3	100.4	69.6	92.9	32.9	13.8	46.2	58.5	9.6	48.8
1981	260.2	203.6	99.2	69.4	104.4	38.0	17.0	49.4	56.5	10.4	46.1
1982	246.6	192.9	84.7	57.0	108.2	41.4	17.3	49.5	53.7	10.0	43.7
1983	281.3	227.5	125.5	94.6	102.0	41.0	12.9	48.1	53.8	10.6	43.2
1984	328.2	271.0	153.8	113.8	117.1	54.9	13.7	48.5	57.7	11.2	46.4
1985	356.0	291.7	158.5	114.7	133.2	66.9	15.8	50.5	64.3	12.0	52.3
1986	388.8	316.6	187.1	133.2	129.4	64.2	13.7	51.5	72.2	12.5	59.7
1987 p	399.5	324.1	198.1	139.6	126.0	60.3	13.1	52.6	75.4	13.9	61.5

See next page for continuation of table.

TABLE B–52.—*New construction activity, 1929–87*—Continued

[Value put in place, billions of dollars; monthly data at seasonally adjusted annual rates]

Year or month	Total new construction	Private construction							Public construction		
		Total	Residential buildings [1]		Nonresidential buildings and other construction [1]				Total	Federal	State and local [5]
			Total [2]	New housing units	Total	Commercial [3]	Industrial	Other [4]			
1986: Jan	376.5	305.3	167.0	121.4	138.3	69.7	15.5	53.1	71.3	12.7	58.6
Feb	375.7	305.0	168.6	123.7	136.5	68.0	15.2	53.2	70.7	12.9	57.8
Mar	389.3	319.1	187.4	125.3	131.7	66.2	13.4	52.1	70.2	12.2	58.0
Apr	417.8	345.2	213.0	128.2	132.1	65.4	14.4	52.3	72.6	12.5	60.1
May	383.2	309.1	181.2	131.3	127.9	62.9	13.4	51.7	74.1	12.5	61.6
June	371.6	299.9	172.0	135.1	127.9	63.1	13.0	51.8	71.7	12.1	59.7
July	391.0	318.4	191.9	136.5	126.5	62.6	12.9	51.1	72.6	12.1	60.5
Aug	395.3	322.6	194.0	136.5	128.6	64.4	13.2	51.0	72.7	12.2	60.5
Sept	400.1	324.9	198.8	137.6	126.1	62.8	13.0	50.3	75.2	14.3	60.9
Oct	394.9	322.9	192.6	139.0	130.3	63.8	14.6	51.9	71.9	11.3	60.6
Nov	390.6	320.4	194.5	138.5	126.0	61.7	13.4	50.8	70.2	12.3	57.9
Dec	380.2	306.8	181.7	137.6	125.1	62.3	13.2	49.7	73.3	13.0	60.3
1987: Jan	384.7	310.2	187.8	137.3	122.4	58.3	12.1	52.0	74.5	13.4	61.2
Feb	401.6	326.5	203.1	137.0	123.3	60.7	12.1	50.5	75.2	11.6	63.6
Mar	388.3	312.2	190.8	139.5	121.4	59.9	11.4	50.1	76.1	12.8	63.4
Apr	396.2	320.5	199.5	139.7	121.0	58.4	11.5	51.1	75.7	12.4	63.3
May	396.7	321.4	195.9	139.4	125.5	60.4	13.4	51.7	75.3	14.6	60.7
June	397.2	324.3	200.9	138.2	123.4	58.9	13.0	51.4	72.9	14.0	58.9
July	398.5	323.8	198.0	137.9	125.8	59.6	13.0	53.2	74.6	14.8	59.8
Aug	402.9	329.8	200.2	138.2	129.6	61.6	13.7	54.4	73.0	14.2	58.8
Sept	402.8	324.9	197.0	140.0	127.9	59.7	14.4	53.8	77.9	16.2	61.7
Oct	403.5	326.7	198.8	141.0	127.9	60.6	13.6	53.7	76.8	13.7	63.1
Nov	411.3	333.6	199.8	142.4	133.8	64.7	14.4	54.7	77.7	14.9	62.8
Dec ^{p}	409.7	330.1	200.8	143.2	129.3	60.8	13.4	55.1	79.6	13.8	65.9

[1] Beginning 1960, farm residential buildings included in residential buildings; prior to 1960, included in nonresidential buildings and other construction.

[2] Includes residential improvements, not shown separately. Prior to 1964, also includes nonhousekeeping units (hotels, motels, etc.)

[3] Office buildings, warehouses, stores, restaurants, garages, etc., and, beginning 1964, hotels and motels; prior to 1964 hotels and motels are included in total residential.

[4] Religious, educational, hospital and institutional, miscellaneous nonresidential, farm (see also footnote 1), public utilities, and all other private.

[5] Includes Federal grants-in-aid for State and local projects.

Source: Department of Commerce, Bureau of the Census.

TABLE B–53.—*New housing units started and authorized, 1959–87*

[Thousands of units]

Year or month	New housing units started						New private housing units authorized[2]			
	Private and public[1]		Private (farm and nonfarm)[1]				Total	Type of structure		
	Total (farm and nonfarm)	Nonfarm	Total	Type of structure				1 unit	2 to 4 units	5 units or more
				1 unit	2 to 4 units	5 units or more				
1959	1,553.7	1,531.3	1,517.0	1,234.0	283.0		1,208.3	938.3	77.1	192.9
1960	1,296.1	1,274.0	1,252.2	994.7	257.4		998.0	746.1	64.6	187.4
1961	1,365.0	1,336.8	1,313.0	974.3	338.7		1,064.2	722.8	67.6	273.8
1962	1,492.5	1,468.7	1,462.9	991.4	471.5		1,186.6	716.2	87.1	383.3
1963	1,634.9	1,614.8	1,603.2	1,012.4	590.8		1,334.7	750.2	118.9	465.6
1964	1,561.0	1,534.0	1,528.8	970.5	108.4	450.0	1,285.8	720.1	100.8	464.9
1965	1,509.7	1,487.5	1,472.8	963.7	86.6	422.5	1,239.8	709.9	84.8	445.1
1966	1,195.8	1,172.8	1,164.9	778.6	61.1	325.1	971.9	563.2	61.0	347.7
1967	1,321.9	1,298.8	1,291.6	843.9	71.6	376.1	1,141.0	650.6	73.0	417.5
1968	1,545.4	1,521.4	1,507.6	899.4	80.9	527.3	1,353.4	694.7	84.3	574.4
1969	1,499.5	1,482.3	1,466.8	810.6	85.0	571.2	1,323.7	625.9	85.2	612.7
1970	1,469.0	(3)	1,433.6	812.9	84.8	535.9	1,351.5	646.8	88.1	616.7
1971	2,084.5	(3)	2,052.2	1,151.0	120.3	780.9	1,924.6	906.1	132.9	885.7
1972	2,378.5	(3)	2,356.6	1,309.2	141.3	906.2	2,218.9	1,033.1	148.6	1,037.2
1973	2,057.5	(3)	2,045.3	1,132.0	118.3	795.0	1,819.5	882.1	117.0	820.5
1974	1,352.5	(3)	1,337.7	888.1	68.1	381.6	1,074.4	643.8	64.3	366.2
1975	1,171.4	(3)	1,160.4	892.2	64.0	204.3	939.2	675.5	63.9	199.8
1976	1,547.6	(3)	1,537.5	1,162.4	85.9	289.2	1,296.2	893.6	93.1	309.5
1977	[1]2,001.7	(3)	1,987.1	1,450.9	121.7	414.4	1,690.0	1,126.1	121.3	442.7
1978	2,036.1	(3)	2,020.3	1,433.3	125.0	462.0	1,800.5	1,182.6	130.6	487.3
1979	1,760.0	(3)	1,745.1	1,194.1	122.0	429.0	1,551.8	981.5	125.4	444.8
1980	1,312.6	(3)	1,292.2	852.2	109.5	330.5	1,190.6	710.4	114.5	365.7
1981	1,100.3	(3)	1,084.2	705.4	91.1	287.7	985.5	564.3	101.8	319.4
1982	1,072.1	(3)	1,062.2	662.6	80.0	319.6	1,000.5	546.4	88.3	365.8
1983	1,712.5	(3)	1,703.0	1,067.6	113.5	522.0	1,605.2	901.5	133.6	570.1
1984	1,755.8	(3)	1,749.5	1,084.2	121.4	544.0	1,681.8	922.4	142.6	616.8
1985	1,745.0	(3)	1,741.8	1,072.4	93.4	576.1	1,733.3	956.6	120.1	656.6
1986	1,807.1	(3)	1,805.4	1,179.4	84.0	542.0	1,769.4	1,077.6	108.4	583.5
1987[p]	....	....	1,617.1	1,143.7	65.3	408.2	1,539.0	1,036.3	87.3	415.3
			Seasonally adjusted annual rates							
1986: Jan	115.9	(3)	2,004	1,302	100	602	1,848	1,058	131	659
Feb	107.2	(3)	1,923	1,183	106	634	1,769	1,024	112	633
Mar	151.1	(3)	1,887	1,195	82	610	1,810	1,038	104	668
Apr	188.3	(3)	1,945	1,220	81	644	1,874	1,132	115	627
May	186.8	(3)	1,848	1,219	83	546	1,778	1,083	120	575
June	183.6	(3)	1,842	1,212	79	551	1,793	1,110	106	577
July	172.2	(3)	1,786	1,147	80	559	1,778	1,098	108	572
Aug	163.8	(3)	1,800	1,180	88	532	1,728	1,059	108	561
Sept	154.3	(3)	1,689	1,123	62	504	1,687	1,071	99	517
Oct	154.9	(3)	1,657	1,114	85	458	1,664	1,036	104	524
Nov	115.9	(3)	1,637	1,129	71	437	1,667	1,028	94	545
Dec	113.1	(3)	1,813	1,233	108	472	1,862	1,184	105	573
1987: Jan	105.1	(3)	1,816	1,253	79	484	1,652	1,085	96	471
Feb	102.8	(3)	1,838	1,303	76	459	1,676	1,204	109	363
Mar	141.3	(3)	1,730	1,211	85	434	1,719	1,150	94	475
Apr	159.6	(3)	1,643	1,208	67	368	1,598	1,058	94	446
May	158.3	(3)	1,606	1,130	67	409	1,493	1,009	91	393
June	163.2	(3)	1,586	1,088	85	413	1,517	1,039	85	393
July	152.5	(3)	1,598	1,143	59	396	1,487	993	87	407
Aug	143.9	(3)	1,585	1,111	59	415	1,502	1,023	83	396
Sept	152.3	(3)	1,685	1,211	50	424	1,502	992	80	430
Oct	139.1	(3)	1,537	1,105	66	366	1,463	977	79	407
Nov	116.6	(3)	1,639	1,110	51	478	1,469	983	82	404
Dec[p]	....	....	1,374	1,023	48	303	1,361	974	81	306

[1] Units in structures built by private developers for sale upon completion to local public housing authorities under the Department of Housing and Urban Development "Turnkey" program are classified as private housing. Military housing starts, including those financed with mortgages insured by FHA under Section 803 of the National Housing Act, are included in publicly owned starts and excluded from total private starts.

[2] Authorized by issuance of local building permit: in 17,000 permit-issuing places beginning 1984; in 16,000 places for 1978–83; in 14,000 places for 1972–77; in 13,000 places for 1967–71; in 12,000 places for 1963–66; and in 10,000 places prior to 1963.

[3] Not available separately beginning January 1970.

Source: Department of Commerce, Bureau of the Census.

TABLE B–54.—*Business expenditures for new plant and equipment, 1947–88*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Industries surveyed quarterly									Addenda				
	All industries	Manufacturing			Nonmanufacturing					Total nonfarm business [2]	Manufacturing	Nonmanufacturing		
		Total	Durable goods	Nondurable goods	Total [1]	Mining	Transportation	Public utilities	Commercial and other			Total	Surveyed quarterly	Surveyed annually [3]
1947	20.11	8.73	3.39	5.34	11.38	0.69	2.69	1.64	6.38	22.27	8.73	13.54	11.38	2.16
1948	22.78	9.25	3.54	5.71	13.53	.93	3.17	2.67	6.77	25.97	9.25	16.73	13.53	3.19
1949	20.28	7.32	2.67	4.64	12.96	.88	2.80	3.28	6.01	24.03	7.32	16.72	12.96	3.76
1950	21.56	7.73	3.22	4.51	13.83	.84	2.87	3.42	6.70	25.81	7.73	18.08	13.83	4.25
1951	26.81	11.07	5.12	5.95	15.74	1.11	3.60	3.75	7.29	31.38	11.07	20.31	15.74	4.57
1952	28.16	12.12	5.75	6.37	16.04	1.21	3.56	3.96	7.31	32.16	12.12	20.04	16.04	4.00
1953	29.96	12.43	5.71	6.72	17.53	1.25	3.58	4.61	8.09	34.20	12.43	21.77	17.53	4.23
1954	28.86	12.00	5.49	6.51	16.85	1.29	2.91	4.23	8.42	33.62	12.00	21.62	16.85	4.76
1955	30.94	12.50	5.87	6.62	18.44	1.31	3.10	4.26	9.77	37.08	12.50	24.58	18.44	6.14
1956	37.90	16.33	8.19	8.15	21.57	1.64	3.56	4.78	11.59	45.25	16.33	28.91	21.57	7.35
1957	40.54	17.50	8.59	8.91	23.04	1.69	3.84	5.95	11.56	48.62	17.50	31.11	23.04	8.08
1958	33.84	12.98	6.21	6.77	20.86	1.43	2.72	5.74	10.97	42.55	12.98	29.57	20.86	8.72
1959	35.88	13.76	6.72	7.04	22.12	1.35	3.47	5.46	11.84	45.17	13.76	31.41	22.12	9.29
1960	39.44	16.36	8.28	8.08	23.08	1.29	3.54	5.40	12.86	48.99	16.36	32.63	23.08	9.55
1961	38.34	15.53	7.43	8.10	22.80	1.26	3.14	5.20	13.21	48.14	15.53	32.60	22.80	9.80
1962	40.86	16.03	7.81	8.22	24.83	1.41	3.59	5.12	14.71	51.61	16.03	35.58	24.83	10.75
1963	43.67	17.27	8.64	8.63	26.40	1.26	3.64	5.33	16.17	53.59	17.27	36.33	26.40	9.93
1964	51.26	21.23	10.98	10.25	30.04	1.33	4.71	5.80	18.20	62.02	21.23	40.80	30.04	10.76
1965	59.52	25.41	13.49	11.92	34.12	1.36	5.66	6.49	20.60	70.79	25.41	45.39	34.12	11.27
1966	70.40	31.37	17.23	14.15	39.03	1.42	6.68	7.82	23.11	82.62	31.37	51.25	39.03	12.22
1967	72.75	32.25	17.83	14.42	40.50	1.38	6.57	9.33	23.22	83.82	32.25	51.57	40.50	11.07
1968	76.42	32.34	17.93	14.40	44.08	1.44	6.91	10.52	25.22	88.92	32.34	56.58	44.08	12.50
1969	85.74	36.27	19.97	16.31	49.47	1.77	7.23	11.70	28.77	100.02	36.27	63.74	49.47	14.27
1970	91.91	36.99	19.80	17.19	54.92	2.02	7.17	13.03	32.71	106.15	36.99	69.16	54.92	14.24
1971	92.91	33.60	16.78	16.82	59.31	2.67	6.42	14.70	35.52	109.18	33.60	75.58	59.31	16.26
1972	103.40	35.42	18.22	17.20	67.98	2.88	7.14	16.26	41.69	120.91	35.42	85.49	67.98	17.51
1973	120.03	42.35	22.63	19.72	77.67	3.30	8.00	17.99	48.39	139.26	42.35	96.91	77.67	19.24
1974	139.67	52.48	26.77	25.71	87.19	4.58	9.16	19.96	53.49	159.83	52.48	107.35	87.19	20.16
1975	142.42	53.66	25.37	28.28	88.76	6.12	9.95	20.23	52.47	162.60	53.66	108.95	88.76	20.19
1976	158.44	58.53	27.50	31.03	99.91	7.63	11.10	22.90	58.29	179.91	58.53	121.38	99.91	21.47
1977	184.82	67.48	32.77	34.71	117.34	9.81	12.20	27.83	67.51	208.15	67.48	140.67	117.34	23.33
1978	217.76	78.58	39.46	39.13	139.18	11.22	13.36	31.50	83.09	245.34	78.58	166.76	139.18	27.58
1979	254.96	95.92	48.50	47.42	159.04	12.81	16.05	35.63	94.56	284.94	95.92	189.02	159.04	29.98
1980	282.80	112.33	55.36	56.96	170.47	15.99	16.60	37.74	100.14	314.47	112.33	202.15	170.47	31.68
1981	315.22	126.54	59.81	66.73	188.68	21.39	15.84	41.21	110.24	349.26	126.54	222.72	188.68	34.04
1982	310.58	120.68	55.35	65.33	189.89	20.05	14.79	45.43	109.63	347.47	120.68	226.79	189.89	36.89
1983	304.78	116.20	53.08	63.12	188.58	15.19	13.97	44.96	114.45	343.35	116.20	227.15	188.58	38.56
1984	354.44	138.82	66.24	72.58	215.61	16.86	16.52	47.48	134.75	398.99	138.82	260.16	215.61	44.55
1985	387.13	153.48	73.27	80.21	233.65	15.88	18.02	48.81	150.94	431.94	153.48	278.46	233.65	44.81
1986	379.47	142.69	69.14	73.56	236.78	11.22	18.80	46.38	160.38	427.23	142.69	284.54	236.78	47.75
1987 [4]	390.57	147.86	71.85	76.01	242.71	11.18	19.10	44.53	167.89	....	147.86	....	242.71	....
1988 [4]	419.00	159.85	73.98	85.87	259.15	11.85	20.63	45.04	181.63	....	159.85	....	259.15	....
1986: I	380.04	145.11	68.71	76.39	234.93	13.13	18.50	47.17	156.14	....	145.11	....	234.93	....
II	376.21	142.19	68.56	73.62	234.03	11.29	18.40	46.43	157.91	....	142.19	....	234.03	....
III	375.50	139.43	69.42	70.01	236.07	10.14	18.81	45.81	161.31	....	139.43	....	236.07	....
IV	386.09	144.07	69.87	74.20	242.02	10.31	19.50	46.12	166.08	....	144.07	....	242.02	....
1987: I	374.23	140.65	70.47	70.18	233.58	10.31	18.98	43.60	160.70	....	140.65	....	233.58	....
II	377.65	140.79	68.76	72.03	236.87	11.02	17.67	43.48	164.69	....	140.79	....	236.87	....
III	393.13	147.56	71.78	75.78	245.58	11.64	19.17	44.90	169.87	....	147.56	....	245.58	....
IV [4]	417.25	162.45	76.40	86.05	254.80	11.74	20.60	46.16	176.29	....	162.45	....	254.80	....
1988: I [4]	427.97	164.68	78.41	86.27	263.29	11.86	22.92	45.36	183.15	....	164.68	....	263.29	....
II [4]	429.07	165.94	77.70	88.23	263.14	12.04	20.53	46.56	184.01	....	165.94	....	263.14	....

---

[1] Excludes forestry, fisheries, and agricultural services; medical services; professional services; social services and membership organizations; and real estate, which, effective with the April–May 1984 survey, are no longer surveyed quarterly. See last column ("nonmanufacturing surveyed annually") for data for these industries.

[2] "All industries" plus the part of nonmanufacturing that is surveyed annually.

[3] Consists of forestry, fisheries, and agricultural services; medical services; professional services; social services and membership organizations; and real estate.

[4] Planned capital expenditures as reported by business in October and November 1987, corrected for biases.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B-55.—*Manufacturing and trade, sales and inventories, 1948–87*

[Amounts in millions of dollars; monthly data seasonally adjusted]

Year or month	Total manufacturing and trade			Manufacturing			Merchant wholesalers			Retail trade		
	Sales [1]	Inventories [2]	Ratio [3]	Sales [1]	Inventories [2]	Ratio [3]	Sales [1]	Inventories [2]	Ratio [3]	Sales [1]	Inventories [2]	Ratio [3]
1948	35,260	52,507	1.42	17,316	28,543	1.57	6,808	7,957	1.13	11,135	16,007	1.39
1949	33,788	49,497	1.53	16,126	25,321	1.75	6,514	7,706	1.19	11,149	15,470	1.41
1950	38,596	59,822	1.36	18,634	31,078	1.48	7,695	9,284	1.07	12,268	19,460	1.38
1951	43,356	70,242	1.55	21,714	39,306	1.66	8,597	9,886	1.16	13,046	21,050	1.64
1952	44,840	72,377	1.58	22,529	41,136	1.78	8,782	10,210	1.12	13,529	21,031	1.52
1953	47,987	76,122	1.58	24,843	43,948	1.76	9,052	10,686	1.17	14,091	21,488	1.53
1954	46,443	73,175	1.60	23,355	41,612	1.81	8,993	10,637	1.18	14,095	20,926	1.51
1955	51,694	79,516	1.47	26,480	45,069	1.62	9,893	11,678	1.13	15,321	22,769	1.43
1956	54,063	87,304	1.55	27,740	50,642	1.73	10,513	13,260	1.19	15,811	23,402	1.47
1957	55,879	89,052	1.59	28,736	51,871	1.80	10,475	12,730	1.23	16,667	24,451	1.44
1958	54,201	87,093	1.60	27,247	50,241	1.84	10,257	12,739	1.24	16,696	24,113	1.43
1959	59,729	92,129	1.50	30,286	52,945	1.70	11,491	13,879	1.15	17,951	25,305	1.40
1960	60,827	94,713	1.56	30,879	53,780	1.75	11,656	14,120	1.22	18,294	26,813	1.45
1961	61,159	95,594	1.54	30,923	54,885	1.74	11,988	14,488	1.20	18,249	26,221	1.43
1962	65,662	101,063	1.50	33,357	58,186	1.70	12,674	14,936	1.16	19,630	27,941	1.38
1963	68,995	105,480	1.49	35,058	60,046	1.69	13,382	16,048	1.15	20,556	29,386	1.39
1964	73,682	111,503	1.47	37,331	63,409	1.64	14,529	17,000	1.14	21,823	31,094	1.40
1965	80,283	120,907	1.45	40,995	68,185	1.60	15,611	18,317	1.15	23,677	34,405	1.39
1966	87,187	136,790	1.47	44,870	77,952	1.62	16,987	20,765	1.15	25,330	38,073	1.44
1967	90,765	144,870	1.60	46,487	84,666	1.77	19,520	24,955	1.27	24,758	35,249	1.41
1968	98,607	155,771	1.58	50,228	90,618	1.74	20,926	26,268	1.25	27,453	38,885	1.36
1969	105,585	169,420	1.60	53,501	98,203	1.77	22,694	28,762	1.24	29,390	42,455	1.39
1970	108,100	177,493	1.64	52,805	101,653	1.90	24,031	32,199	1.29	31,264	43,641	1.38
1971	116,769	187,722	1.61	55,906	102,656	1.83	26,350	35,210	1.30	34,513	49,856	1.38
1972	130,931	201,862	1.54	63,027	108,237	1.68	29,695	38,816	1.28	38,209	54,809	1.37
1973	153,762	233,171	1.52	72,931	124,626	1.59	38,173	45,556	1.17	42,658	62,989	1.39
1974	177,946	285,883	1.61	84,790	157,792	1.67	47,989	57,239	1.15	45,167	70,852	1.48
1975	182,402	288,417	1.58	86,589	159,935	1.84	46,803	56,972	1.31	49,010	71,510	1.44
1976	204,381	318,647	1.56	98,797	175,195	1.69	50,885	64,365	1.29	54,699	79,087	1.40
1977	229,773	351,164	1.53	113,202	189,214	1.62	56,364	72,801	1.28	60,207	89,149	1.41
1978	260,587	399,220	1.53	126,905	210,509	1.58	66,669	86,405	1.27	67,013	102,306	1.44
1979	298,139	451,166	1.51	143,936	241,100	1.58	79,472	99,262	1.25	74,731	110,804	1.45
1980	327,871	493,921	1.51	154,391	264,281	1.67	93,704	113,478	1.20	79,776	116,162	1.43
1981	356,697	527,756	1.48	168,129	282,645	1.65	102,013	118,259	1.20	86,555	126,854	1.41
1982	348,746	574,126	1.67	163,350	311,421	1.95	96,290	128,196	1.35	89,107	134,509	1.49
1983	369,266	589,280	1.56	171,242	312,152	1.80	100,424	129,803	1.27	97,599	147,325	1.44
1984	408,721	641,328	1.52	187,869	334,163	1.74	113,404	140,865	1.21	107,448	166,300	1.48
1985	419,459	650,695	1.54	189,928	326,780	1.74	114,563	144,244	1.25	114,968	179,671	1.50
1986	425,752	652,771	1.54	189,442	318,238	1.70	115,109	147,375	1.28	121,201	187,158	1.54
1986: Jan	424,035	651,884	1.54	190,391	325,756	1.71	115,251	144,952	1.26	118,393	181,176	1.53
Feb	419,567	652,872	1.56	188,618	324,551	1.72	113,359	144,967	1.28	117,590	183,354	1.56
Mar	415,687	653,905	1.57	185,483	323,774	1.75	112,945	145,518	1.29	117,259	184,613	1.57
Apr	421,276	654,980	1.55	189,276	323,315	1.71	113,887	145,900	1.28	118,113	185,765	1.57
May	417,493	652,853	1.56	187,361	322,216	1.72	110,625	145,650	1.32	119,507	184,987	1.55
June	422,031	653,566	1.55	188,957	321,261	1.70	113,469	146,585	1.29	119,605	185,720	1.55
July	421,167	656,371	1.56	186,331	320,888	1.72	114,358	147,711	1.29	120,478	187,772	1.56
Aug	423,040	655,553	1.55	187,249	319,613	1.71	114,056	147,939	1.30	121,735	188,001	1.54
Sept	437,226	653,666	1.50	190,384	318,356	1.67	117,741	148,253	1.26	129,101	187,057	1.45
Oct	429,250	655,614	1.53	189,744	318,276	1.68	117,284	147,268	1.26	122,222	190,070	1.56
Nov	429,782	655,257	1.52	190,159	318,755	1.68	117,892	147,548	1.25	121,731	188,954	1.55
Dec	443,623	652,624	1.47	197,474	318,238	1.61	118,462	147,352	1.24	127,687	187,034	1.46
1987: Jan	424,550	659,001	1.55	189,956	320,654	1.69	116,545	149,347	1.28	118,049	189,000	1.60
Feb	443,169	660,470	1.49	195,608	320,535	1.64	123,281	149,408	1.21	124,280	190,527	1.53
Mar	445,032	663,010	1.49	197,430	320,090	1.62	123,009	149,565	1.22	124,593	193,355	1.55
Apr	444,357	665,877	1.50	195,958	320,785	1.64	123,439	150,050	1.22	124,960	195,042	1.56
May	446,282	671,609	1.50	196,929	321,848	1.63	124,486	152,673	1.23	124,867	197,088	1.58
June	451,734	674,753	1.49	200,591	321,621	1.60	124,836	153,093	1.23	126,307	200,039	1.58
July	452,652	677,743	1.50	199,395	323,333	1.62	126,196	152,648	1.21	127,061	201,762	1.59
Aug	457,499	678,442	1.48	200,404	325,394	1.62	128,164	151,222	1.18	128,931	201,826	1.57
Sept	462,434	682,323	1.48	205,732	326,670	1.59	129,912	153,245	1.18	126,790	202,408	1.60
Oct	462,411	689,926	1.49	206,396	328,554	1.59	130,384	156,632	1.20	125,631	204,740	1.63
Nov	460,616	696,416	1.51	207,226	331,812	1.60	127,400	157,287	1.23	125,990	207,317	1.65
Dec [p]	466,573	701,868	1.50	211,695	333,221	1.57	127,419	158,183	1.24	127,459	210,464	1.65

[1] Monthly average for year and total for month.

[2] Seasonally adjusted, end of period. Inventories beginning January 1982 for manufacturing and December 1980 for wholesale and retail trade are not comparable with earlier periods.

[3] Inventory/sales ratio. Beginning 1967 annual data are averages of monthly figures except for manufacturing and trade combined, which are based on December inventories and monthly average sales for the year. For earlier periods, data are weighted averages. For monthly data, ratio of inventories at end of month to sales for month.

Note.—Earlier data are not strictly comparable with data beginning 1958 for manufacturing and beginning 1967 for wholesale and retail trade.

The inventory figures in this table do not agree with the estimates of change in business inventories included in the gross national product since these figures cover only manufacturing and trade rather than all business.

Source: Department of Commerce, Bureau of the Census.

TABLE B-56.—*Manufacturers' shipments and inventories, 1947–87*

[Millions of dollars; monthly data seasonally adjusted]

Year or month	Shipments [1]			Inventories [2]								
					Durable goods industries				Nondurable goods industries			
	Total	Durable goods industries	Nondurable goods industries	Total	Total	Materials and supplies	Work in process	Finished goods	Total	Materials and supplies	Work in process	Finished goods
1947	15,513	6,694	8,819	25,897	13,061	...	...	...	12,836	...	...	...
1948	17,316	7,579	9,738	28,543	14,662	...	...	...	13,881	...	...	...
1949	16,126	7,191	8,935	26,321	13,060	...	...	...	13,261	...	...	...
1950	18,634	8,845	9,789	31,078	15,539	...	...	...	15,539	...	...	...
1951	21,714	10,493	11,221	39,306	20,991	...	...	...	18,315	...	...	...
1952	22,529	11,313	11,216	41,136	23,731	...	...	...	17,405	...	...	...
1953	24,843	13,349	11,494	43,948	25,878	8,966	10,720	6,206	18,070	8,317	2,472	7,409
1954	23,355	11,828	11,527	41,612	23,710	7,894	9,721	6,040	17,902	8,167	2,440	7,415
1955	26,480	14,071	12,409	45,069	26,405	9,194	10,756	6,348	18,664	8,556	2,571	7,666
1956	27,740	14,715	13,025	50,642	30,447	10,417	12,317	7,565	20,195	8,971	2,721	8,622
1957	28,736	15,237	13,499	51,871	31,728	10,608	12,837	8,125	20,143	8,775	2,864	8,624
1958	27,247	13,563	13,684	50,241	30,258	10,032	12,387	7,839	19,983	8,662	2,828	8,491
1959	30,286	15,609	14,677	52,945	32,077	10,776	13,063	8,239	20,868	9,080	2,944	8,845
1960	30,879	15,883	14,996	53,780	32,371	10,353	12,772	9,245	21,409	9,082	2,946	9,380
1961	30,923	15,616	15,307	54,885	32,544	10,279	13,203	9,063	22,341	9,493	3,110	9,738
1962	33,357	17,262	16,095	58,186	34,632	10,810	14,159	9,662	23,554	9,813	3,296	10,444
1963	35,058	18,280	16,778	60,046	35,866	11,068	14,871	9,925	24,180	9,978	3,406	10,796
1964	37,331	19,637	17,694	63,409	38,506	11,970	16,191	10,344	24,903	10,131	3,511	11,261
1965	40,995	22,221	18,774	68,185	42,257	13,325	18,075	10,854	25,928	10,448	3,806	11,674
1966	44,870	24,649	20,220	77,952	49,920	15,489	21,939	12,491	28,032	11,155	4,204	12,673
1967	46,487	25,267	21,220	84,666	55,005	16,455	25,005	13,547	29,659	11,715	4,421	13,523
1968	50,228	27,659	22,570	90,618	58,875	17,376	27,336	14,163	31,743	12,289	4,848	14,606
1969	53,501	29,437	24,064	98,203	64,739	18,693	30,408	15,639	33,463	12,724	5,122	15,617
1970	52,805	28,188	24,617	101,653	66,780	19,182	29,848	17,751	34,871	13,150	5,274	16,448
1971	55,906	29,954	25,952	102,656	66,289	19,759	28,650	17,880	36,368	13,683	5,665	17,019
1972	63,027	34,027	29,000	108,237	70,250	20,860	30,788	18,601	37,988	14,676	5,982	17,330
1973	72,931	39,681	33,250	124,626	81,398	26,028	35,545	19,823	43,230	18,132	6,707	18,391
1974	84,790	44,230	40,560	157,792	101,739	35,151	42,603	23,985	56,053	23,699	8,175	24,179
1975	86,589	43,659	42,931	159,935	102,874	33,920	43,369	25,586	57,060	23,542	8,837	24,681
1976	98,797	50,700	48,097	175,195	112,581	37,548	46,345	28,690	62,612	25,833	9,933	26,846
1977	113,202	59,267	53,935	189,214	121,601	40,251	50,620	30,730	67,613	27,398	11,003	29,212
1978	126,905	67,848	59,057	210,509	137,891	45,252	58,634	34,005	72,618	29,317	11,907	31,394
1979	143,936	76,060	67,876	241,100	160,533	52,687	69,254	38,592	80,567	32,451	13,741	34,375
1980	154,391	77,550	76,841	264,281	174,620	55,121	76,997	42,502	89,661	36,206	15,732	37,723
1981	168,129	83,872	84,257	282,645	186,347	57,927	81,105	47,315	96,298	37,758	16,074	42,466
1982	163,350	79,352	83,998	311,421	200,711	58,755	87,508	54,448	110,710	43,798	18,357	48,555
1983	171,242	84,956	86,286	312,152	200,220	60,047	87,802	52,371	111,932	44,550	18,649	48,733
1984	187,869	96,623	91,246	334,163	218,524	64,759	97,828	55,937	115,639	44,826	18,807	52,006
1985	189,928	98,930	90,997	326,780	213,750	62,163	97,219	54,368	113,030	42,865	18,775	51,390
1986	189,442	100,142	89,300	318,238	207,854	59,371	95,310	53,173	110,384	42,986	17,338	50,060
1987 p	200,716	105,323	95,393	333,221	216,348	60,249	100,799	55,300	116,873	45,635	18,793	52,445
1986: Jan	190,391	98,396	91,995	325,756	213,429	61,236	97,858	54,335	112,327	42,894	18,016	51,417
Feb	188,618	99,082	89,536	324,551	212,598	60,901	97,361	54,336	111,953	42,801	18,061	51,091
Mar	185,483	97,711	87,772	323,774	212,697	60,500	97,998	54,199	111,077	42,444	17,618	51,015
Apr	189,276	100,941	88,335	323,315	212,226	60,596	97,760	53,870	111,089	42,376	17,411	51,302
May	187,361	98,619	88,742	322,216	211,951	60,211	97,672	54,068	110,265	42,159	17,303	50,803
June	188,957	99,602	89,355	321,261	211,063	60,326	97,565	53,172	110,198	42,178	17,395	50,625
July	186,331	99,712	86,619	320,888	210,462	59,835	97,137	53,490	110,426	42,593	17,270	50,563
Aug	187,249	98,185	89,064	319,613	209,684	59,478	97,011	53,195	109,929	42,502	17,021	50,406
Sept	190,384	100,655	89,729	318,356	209,402	59,465	96,978	52,959	108,954	42,092	17,084	49,778
Oct	189,744	101,031	88,713	318,276	209,033	58,966	96,892	53,175	109,243	42,181	17,272	49,790
Nov	190,159	100,009	90,150	318,755	209,219	59,292	96,108	53,819	109,536	42,123	17,269	50,144
Dec	197,474	106,394	91,080	318,238	207,854	59,371	95,310	53,173	110,384	42,986	17,338	50,060
1987: Jan	189,956	99,318	90,638	320,654	209,090	59,817	95,589	53,684	111,564	43,021	17,612	50,931
Feb	195,608	103,601	92,007	320,535	208,644	59,499	95,617	53,528	111,891	43,023	17,914	50,954
Mar	197,430	104,750	92,680	320,090	207,987	59,226	95,069	53,692	112,103	43,191	18,018	50,894
Apr	195,958	102,747	93,211	320,785	208,683	59,770	95,335	53,578	112,102	43,624	17,832	50,646
May	196,929	102,477	94,452	321,848	209,096	59,723	95,768	53,605	112,752	44,045	18,029	50,678
June	200,591	104,476	96,115	321,621	208,654	59,759	96,060	52,835	112,967	44,184	18,134	50,649
July	199,395	103,032	96,363	323,333	209,951	59,417	96,904	53,630	113,382	44,394	18,034	50,954
Aug	200,404	104,135	96,269	325,394	210,921	59,328	97,706	53,887	114,473	44,602	18,385	51,486
Sept	205,732	108,433	97,299	326,670	211,680	59,554	98,623	53,503	114,990	45,288	18,432	51,270
Oct	206,396	108,251	98,145	328,554	213,436	59,587	99,390	54,459	115,118	45,109	18,554	51,455
Nov	207,226	108,378	98,848	331,812	215,931	60,031	100,824	55,076	115,881	45,420	18,736	51,725
Dec p	211,695	113,282	98,413	333,221	216,348	60,249	100,799	55,300	116,873	45,635	18,793	52,445

[1] Monthly average for year and total for month.

[2] Seasonally adjusted, end of period. Data beginning 1982 are not comparable with data for prior periods.

Note.—Data beginning 1958 are not strictly comparable with earlier data.

Source: Department of Commerce, Bureau of the Census.

Table B–57.—*Manufacturers' new and unfilled orders, 1947–87*

[Amounts in millions of dollars; monthly data seasonally adjusted]

Year or month	New orders [1]				Unfilled orders [2]			Unfilled orders—shipments ratio [3]		
	Total	Durable goods industries		Nondurable goods industries	Total	Durable goods industries	Nondurable goods industries	Total	Durable goods industries	Nondurable goods industries
		Total	Capital goods industries, nondefense							
1947	15,256	6,388	....	8,868	34,473	28,579	5,894	....	....	....
1948	17,693	8,126	....	9,566	30,736	26,619	4,117	....	....	....
1949	15,614	6,633	....	8,981	24,045	19,622	4,423	....	....	....
1950	20,110	10,165	....	9,945	41,456	35,435	6,021	....	....	....
1951	23,907	12,841	....	11,066	67,266	63,394	3,872	....	....	....
1952	23,204	12,061	....	11,143	75,857	72,680	3,177	....	....	....
1953	23,586	12,147	....	11,439	61,178	58,637	2,541	....	....	....
1954	22,335	10,768	....	11,566	48,266	45,250	3,016	3.42	4.12	0.96
1955	27,465	14,996	....	12,469	60,004	56,241	3,763	3.63	4.27	1.12
1956	28,368	15,365	....	13,003	67,375	63,880	3,495	3.87	4.55	1.04
1957	27,559	14,111	....	13,448	53,183	50,352	2,831	3.35	4.00	.85
1958	27,002	13,290	....	13,712	47,370	44,559	2,811	3.09	3.69	.86
1959	30,724	16,003	....	14,720	52,732	49,373	3,359	3.01	3.54	.94
1960	30,235	15,303	....	14,932	45,080	42,514	2,566	2.78	3.37	.72
1961	31,104	15,759	....	15,345	47,407	44,375	3,032	2.63	3.13	.79
1962	33,436	17,374	....	16,061	48,577	45,965	2,612	2.69	3.24	.68
1963	35,524	18,709	....	16,815	54,327	51,270	3,057	2.80	3.37	.73
1964	38,357	20,652	....	17,705	66,882	63,691	3,191	3.10	3.72	.72
1965	42,100	23,278	....	18,823	80,071	76,298	3,773	3.33	3.95	.80
1966	46,402	26,177	....	20,225	98,401	94,575	3,826	3.81	4.55	.76
1967	47,056	25,825	....	21,231	104,547	100,576	3,971	3.70	4.40	.73
1968	50,687	28,116	6,903	22,571	109,926	105,950	3,976	3.85	4.65	.69
1969	53,950	29,871	7,660	24,079	115,422	111,250	4,172	3.75	4.50	.69
1970	52,038	27,388	6,738	24,650	106,158	101,566	4,592	3.65	4.39	.77
1971	55,983	29,998	7,444	25,986	107,147	102,119	5,027	3.38	4.06	.77
1972	64,167	35,064	8,622	29,104	121,061	114,725	6,336	3.31	3.90	.88
1973	76,056	42,726	10,971	33,330	158,884	151,504	7,380	3.86	4.56	.93
1974	87,244	46,835	12,673	40,409	188,467	182,925	5,542	4.13	4.96	.64
1975	85,220	42,099	11,011	43,122	172,037	164,139	7,898	3.76	4.52	.84
1976	99,532	51,403	12,791	48,129	180,562	172,273	8,288	3.30	3.94	.76
1977	115,032	61,082	15,291	53,950	203,475	195,008	8,467	3.27	3.89	.70
1978	131,546	72,339	19,458	59,207	259,770	249,483	10,287	3.59	4.22	.78
1979	147,403	79,451	23,231	67,953	302,145	290,921	11,224	3.88	4.61	.76
1980	156,161	79,360	23,259	76,801	323,393	312,648	10,745	3.81	4.55	.67
1981	167,752	83,553	24,050	84,199	319,094	309,066	10,028	3.77	4.57	.59
1982	161,600	77,676	21,469	83,924	306,302	297,344	8,958	3.75	4.62	.51
1983	173,915	87,485	22,143	86,431	338,849	328,103	10,746	3.45	4.19	.54
1984	190,065	98,875	26,714	91,189	365,177	355,114	10,063	3.52	4.29	.48
1985	190,631	99,600	26,970	91,030	373,495	363,030	10,465	3.57	4.36	.49
1986	189,482	100,131	26,671	89,351	372,974	361,855	11,119	3.41	4.22	.47
1987 p	203,270	107,672	29,624	95,598	404,104	390,393	13,711	3.43	4.22	.54
1986: Jan	190,981	99,022	24,956	91,959	374,085	363,656	10,429	3.72	4.61	.48
Feb	190,928	101,265	27,659	89,663	376,395	365,839	10,556	3.67	4.53	.49
Mar	188,769	100,937	26,613	87,832	379,681	369,065	10,616	3.73	4.62	.48
Apr	186,606	98,176	25,357	88,430	377,011	366,300	10,711	3.65	4.49	.49
May	186,127	97,298	25,429	88,829	375,777	364,979	10,798	3.68	4.55	.50
June	187,022	97,899	25,851	89,123	373,842	363,276	10,566	3.60	4.47	.47
July	186,334	99,679	26,404	86,655	373,845	363,243	10,602	3.63	4.49	.48
Aug	185,208	96,303	25,340	88,905	371,804	361,361	10,443	3.61	4.51	.45
Sept	193,043	102,947	27,155	90,096	374,463	363,653	10,810	3.57	4.44	.47
Oct	188,841	99,976	27,542	88,865	373,560	362,598	10,962	3.55	4.42	.47
Nov	190,153	99,979	27,268	90,174	373,554	362,568	10,986	3.53	4.41	.47
Dec	196,894	105,681	29,142	91,213	372,974	361,855	11,119	3.41	4.22	.47
1987: Jan	187,356	96,434	27,024	90,922	370,374	358,971	11,403	3.60	4.52	.49
Feb	194,485	101,932	26,856	92,553	369,251	357,302	11,949	3.48	4.34	.50
Mar	199,399	106,213	27,396	93,186	371,220	358,765	12,455	3.43	4.25	.52
Apr	200,624	106,977	28,310	93,647	375,886	362,995	12,891	3.53	4.40	.54
May	201,397	106,992	30,031	94,405	380,354	367,510	12,844	3.56	4.44	.53
June	205,454	109,181	29,987	96,273	385,217	372,215	13,002	3.53	4.41	.53
July	206,065	109,213	31,982	96,852	391,887	378,396	13,491	3.59	4.51	.54
Aug	203,157	106,678	29,540	96,479	394,640	380,939	13,701	3.60	4.49	.55
Sept	206,719	109,345	29,753	97,374	395,627	381,851	13,776	3.48	4.30	.56
Oct	209,399	111,095	30,416	98,304	398,630	384,695	13,935	3.52	4.38	.55
Nov	209,626	110,949	30,085	98,677	401,030	387,266	13,764	3.52	4.38	.54
Dec p	214,769	116,409	33,559	98,360	404,104	390,393	13,711	3.43	4.22	.54

---

[1] Monthly average for year and total for month.

[2] Seasonally adjusted, end of period.

[3] Ratio of unfilled orders at end of period to shipments for period; excludes industries with no unfilled orders. Annual figures relate to seasonally adjusted data for December.

Note.—Data beginning 1958 are not strictly comparable with earlier data.

Source: Department of Commerce, Bureau of the Census.

Table B–58.—*Consumer price indexes, major expenditure classes, 1946–87*

[1967=100]

Year or month	All items	Food and beverages		Housing				Apparel and upkeep	Transportation	Medical care	Entertainment	Other goods and services	Energy [3]
		Total [1]	Food	Total [2]	Shelter	Fuel and other utilities [3]	Household furnishings and operation [2]						
1946	58.5	....	58.1	60.6	....	....	....	67.5	50.3	44.4	....	....	....
1947	66.9	....	70.6	65.2	....	....	....	78.2	55.5	48.1	....	....	....
1948	72.1	....	76.6	69.8	....	....	....	83.3	61.8	51.1	....	....	....
1949	71.4	....	73.5	70.9	....	....	....	80.1	66.4	52.7	....	....	....
1950	72.1	....	74.5	72.8	....	....	....	79.0	68.2	53.7	....	....	....
1951	77.8	....	82.8	77.2	....	....	....	86.1	72.5	56.3	....	....	....
1952	79.5	....	84.3	78.7	....	....	....	85.3	77.3	59.3	....	....	....
1953	80.1	....	83.0	80.8	76.5	83.0	91.3	84.6	79.5	61.4	....	....	....
1954	80.5	....	82.8	81.7	78.2	83.5	90.9	84.5	78.3	63.4	....	....	....
1955	80.2	....	81.6	82.3	79.1	85.1	89.9	84.1	77.4	64.8	....	....	....
1956	81.4	....	82.2	83.6	80.4	87.3	89.9	85.8	78.8	67.2	....	....	....
1957	84.3	....	84.9	86.2	83.4	89.9	91.9	87.3	83.3	69.9	....	....	90.1
1958	86.6	....	88.5	87.7	85.1	91.7	92.3	87.5	86.0	73.2	....	....	90.3
1959	87.3	....	87.1	88.6	86.0	93.8	93.1	88.2	89.6	76.4	....	....	91.8
1960	88.7	....	88.0	90.2	87.8	95.9	93.8	89.6	89.6	79.1	....	....	94.2
1961	89.6	....	89.1	90.9	88.5	97.1	93.7	90.4	90.6	81.4	....	....	94.4
1962	90.6	....	89.9	91.7	89.6	97.3	93.8	90.9	92.5	83.5	....	....	94.7
1963	91.7	....	91.2	92.7	90.7	98.2	94.6	91.9	93.0	85.6	....	....	95.0
1964	92.9	....	92.4	93.8	92.2	98.4	95.0	92.7	94.3	87.3	....	....	94.6
1965	94.5	....	94.4	94.9	93.8	98.3	95.3	93.7	95.9	89.5	....	....	96.3
1966	97.2	....	99.1	97.2	96.8	98.8	97.0	96.1	97.2	93.4	....	....	97.8
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	104.2	103.6	103.6	104.0	104.8	101.3	103.8	105.4	103.2	106.1	105.7	105.2	101.5
1969	109.8	108.8	108.9	110.4	113.3	103.6	107.7	111.5	107.2	113.4	111.0	110.4	104.2
1970	116.3	114.7	114.9	118.2	123.6	107.6	111.5	116.1	112.7	120.6	116.7	116.8	107.0
1971	121.3	118.3	118.4	123.4	128.8	115.0	115.7	119.8	118.6	128.4	122.9	122.4	111.2
1972	125.3	123.2	123.5	128.1	134.5	120.1	118.3	122.3	119.9	132.5	126.5	127.5	114.3
1973	133.1	139.5	141.4	133.7	140.7	126.9	121.6	126.8	123.8	137.7	130.0	132.5	123.5
1974	147.7	158.7	161.7	148.8	154.4	150.2	135.3	136.2	137.7	150.5	139.8	142.0	159.7
1975	161.2	172.1	175.4	164.5	169.7	167.8	151.0	142.3	150.6	168.6	152.2	153.9	176.6
1976	170.5	177.4	180.8	174.6	179.0	182.7	160.1	147.6	165.5	184.7	159.8	162.7	189.3
1977	181.5	188.0	192.2	186.5	191.1	202.2	167.5	154.2	177.2	202.4	167.7	172.2	207.3
1978	195.4	206.3	211.4	202.8	210.4	216.0	177.7	159.6	185.5	219.4	176.6	183.3	220.4
1979	217.4	228.5	234.5	227.6	239.7	239.3	190.3	166.6	212.0	239.7	188.5	196.7	275.9
1980	246.8	248.0	254.6	263.3	281.7	278.6	205.4	178.4	249.7	265.9	205.3	214.5	361.1
1981	272.4	267.3	274.6	293.5	314.7	319.2	221.3	186.9	280.0	294.5	221.4	235.7	410.0
1982	289.1	278.2	285.7	314.7	337.0	350.8	233.2	191.8	291.5	328.7	235.8	259.9	416.1
1983	298.4	284.4	291.7	323.1	344.8	370.3	238.5	196.5	298.4	357.3	246.0	288.3	419.3
1984	311.1	295.1	302.9	336.5	361.7	387.3	242.5	200.2	311.7	379.5	255.1	307.7	423.6
1985	322.2	302.0	309.8	349.9	382.0	393.6	247.2	206.0	319.9	403.1	265.0	326.6	426.5
1986	328.4	311.8	319.7	360.2	402.9	384.7	250.4	207.8	307.5	433.5	274.1	346.4	370.3
1987	340.4	324.5	333.0	371.0	421.8	380.7	254.9	216.9	316.8	462.2	283.2	366.5	371.7
1986: Jan	328.4	307.9	315.6	356.8	393.8	394.6	248.8	205.0	323.9	418.2	270.8	339.1	424.7
Feb	327.5	307.7	315.3	356.5	394.8	390.0	249.0	204.1	319.2	422.3	272.0	340.3	408.9
Mar	326.0	307.8	315.4	357.0	397.0	385.5	249.8	206.3	309.6	425.8	271.9	341.1	381.3
Apr	325.3	308.5	316.1	358.0	400.1	381.8	249.6	207.3	303.3	428.0	272.3	341.8	361.8
May	326.3	309.4	317.0	358.5	400.9	382.5	249.9	206.4	305.7	429.7	272.9	342.1	367.6
June	327.9	309.5	317.1	361.2	401.6	393.8	250.2	204.5	308.6	432.0	273.9	342.6	380.6
July	328.0	312.2	320.1	361.5	403.5	389.4	250.5	203.2	304.7	434.8	274.4	344.9	366.5
Aug	328.6	314.6	322.7	362.4	405.2	389.5	250.5	207.0	301.3	437.5	274.7	346.4	358.6
Sept	330.2	315.1	323.2	363.7	407.6	388.3	251.5	212.1	302.2	439.7	275.3	353.3	360.6
Oct	330.5	315.6	323.7	363.0	409.5	379.1	251.6	213.2	302.6	442.3	276.5	354.6	348.6
Nov	330.8	316.4	324.6	361.7	410.2	371.1	251.2	213.1	304.3	444.6	277.4	354.9	341.7
Dec	331.1	317.0	325.2	362.1	410.4	371.0	252.4	210.9	304.8	446.8	277.4	355.2	342.4
1987: Jan	333.1	320.5	328.9	363.9	412.3	373.7	253.1	207.1	308.5	449.6	278.3	358.1	352.2
Feb	334.4	321.6	330.1	365.1	414.0	374.8	253.5	208.4	310.0	452.4	278.7	359.7	359.2
Mar	335.9	321.6	330.0	366.4	415.9	374.9	254.3	215.2	310.6	455.0	279.8	360.3	360.0
Apr	337.7	322.5	331.0	367.7	418.0	374.2	255.2	218.7	313.3	457.3	281.3	361.1	362.4
May	338.7	324.0	332.5	368.9	419.2	377.5	254.9	218.0	314.6	458.9	282.0	362.0	366.9
June	340.1	325.4	334.1	371.3	420.2	387.6	254.9	214.5	316.7	461.3	282.3	362.9	380.6
July	340.8	325.1	333.6	372.5	422.1	388.1	255.1	210.5	318.5	464.1	283.5	365.1	382.4
Aug	342.7	325.4	333.8	374.9	425.1	391.1	255.4	214.7	320.2	466.1	283.9	366.6	388.9
Sept	344.4	326.4	334.9	375.4	426.2	389.8	255.8	222.2	320.4	467.8	285.2	373.9	387.4
Oct	345.3	326.9	335.3	375.2	428.6	381.3	255.6	226.3	321.9	469.8	287.1	375.5	376.7
Nov	345.8	326.7	335.1	374.9	429.2	378.2	255.6	226.4	324.1	471.7	288.1	376.1	373.5
Dec	345.7	328.1	336.7	375.3	430.4	376.9	255.3	221.1	323.3	472.9	288.5	376.9	370.4

[1] Includes alcoholic beverages, not shown separately.

[2] Series beginning 1967 not comparable with series for earlier years.

[3] See Tables B–59 and B–60.

Note.—Data beginning 1978 are for all urban consumers; earlier data are for urban wage earners and clerical workers. Data beginning 1983 incorporate a rental equivalence measure for homeowners' costs and therefore are not strictly comparable with earlier figures.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B-59.—*Consumer price indexes, selected expenditure classes, 1946–87*

[1967=100, except as noted]

Year or month	Food and beverages				Shelter					Fuel and other utilities				
	Total [1]	Food			Total	Renters' costs		Homeowners' costs [2]	Maintenance and repairs	Total	Household fuels			Other utilities and public services
		Total	At home	Away from home		Total [2]	Rent, residential				Total	Fuel oil and other household fuel commodities	Gas (piped) and electricity	
1946	......	58.1	......	......	......	......	59.2	......	......	......	......	51.3	77.4	......
1947	......	70.6	73.5	......	......	......	61.1	......	......	......	......	58.4	77.1	......
1948	......	76.6	79.8	......	......	......	65.1	......	......	......	......	68.6	79.1	......
1949	......	73.5	76.7	......	......	......	68.0	......	......	......	......	70.3	81.0	......
1950	......	74.5	77.6	......	......	......	70.4	......	......	......	......	72.7	81.2	......
1951	......	82.8	86.3	......	......	......	73.2	......	......	......	......	76.5	81.5	......
1952	......	84.3	87.8	......	......	......	76.2	......	......	......	......	78.0	82.6	......
1953	......	83.0	86.2	68.9	76.5	......	80.3	......	71.2	83.0	......	81.5	84.2	......
1954	......	82.8	85.8	70.1	78.2	......	83.2	......	72.4	83.5	......	81.2	85.3	......
1955	......	81.6	84.1	70.8	79.1	......	84.3	......	74.1	85.1	......	82.3	87.5	......
1956	......	82.2	84.4	72.2	80.4	......	85.9	......	77.2	87.3	......	85.9	88.4	......
1957	......	84.9	87.2	74.9	83.4	......	87.5	......	80.5	89.9	......	90.3	89.3	......
1958	......	88.5	91.0	77.2	85.1	......	89.1	......	81.8	91.7	......	88.7	92.4	......
1959	......	87.1	88.8	79.3	86.0	......	90.4	......	83.2	93.8	......	89.8	94.7	......
1960	......	88.0	89.6	81.4	87.8	......	91.7	......	84.6	95.9	......	89.2	98.6	......
1961	......	89.1	90.4	83.2	88.5	......	92.9	......	85.9	97.1	......	91.0	99.4	......
1962	......	89.9	91.0	85.4	89.6	......	94.0	......	86.5	97.3	......	91.5	99.4	......
1963	......	91.2	92.2	87.3	90.7	......	95.0	......	87.7	98.2	......	93.2	99.4	......
1964	......	92.4	93.2	88.9	92.2	......	95.9	......	89.5	98.4	......	92.7	99.4	......
1965	......	94.4	95.5	90.9	93.8	......	96.9	......	91.3	98.3	......	94.6	99.4	......
1966	......	99.1	100.3	95.1	96.8	......	98.2	......	95.2	98.8	......	97.0	99.6	......
1967	100.0	100.0	100.0	100.0	100.0	......	100.0	......	100.0	100.0	100.0	100.0	100.0	100.0
1968	103.6	103.6	103.2	105.2	104.8	......	102.4	......	106.1	101.3	101.4	103.1	100.9	101.2
1969	108.8	108.9	108.2	111.6	113.3	......	105.7	......	115.0	103.6	103.4	105.6	102.8	104.0
1970	114.7	114.9	113.7	119.9	123.6	......	110.1	......	124.0	107.6	107.9	110.1	107.3	107.4
1971	118.3	118.4	116.4	126.1	128.8	......	115.2	......	133.7	115.0	115.3	117.5	114.7	114.7
1972	123.2	123.5	121.6	131.1	134.5	......	119.2	......	140.7	120.1	120.1	118.5	120.5	120.6
1973	139.5	141.4	141.4	141.4	140.7	......	124.3	......	151.0	126.9	128.4	136.0	126.4	124.1
1974	158.7	161.7	162.4	159.4	154.4	......	130.6	......	171.6	150.2	160.7	214.6	145.8	130.3
1975	172.1	175.4	175.8	174.3	169.7	......	137.3	......	187.6	167.8	183.8	235.3	169.6	137.1
1976	177.4	180.8	179.5	186.1	179.0	......	144.7	......	199.6	132.7	202.3	250.8	189.0	145.4
1977	188.0	192.2	190.2	200.3	191.1	......	153.5	......	214.7	202.2	228.6	283.4	213.4	152.0
1978	206.3	211.4	210.2	218.4	210.4	......	164.0	......	233.0	216.0	247.4	298.3	232.6	158.3
1979	228.5	234.5	232.9	242.9	239.7	......	176.0	......	256.4	239.3	286.4	403.1	257.8	159.5
1980	248.0	254.6	251.5	267.0	281.7	......	191.6	......	285.7	278.6	349.4	556.0	301.8	165.2
1981	267.3	274.6	269.9	291.0	314.7	......	208.2	......	314.4	319.2	407.0	675.9	345.9	181.0
1982	278.2	285.7	279.2	306.5	337.0	......	224.0	......	334.1	350.8	446.2	667.9	393.8	200.2
1983	284.4	291.7	282.2	319.9	344.8	103.0	236.9	102.5	346.3	370.3	469.2	628.0	428.7	213.7
1984	295.1	302.9	292.6	333.4	361.7	108.6	249.3	107.3	359.2	387.3	485.5	641.8	445.2	230.2
1985	302.0	309.8	296.8	346.6	382.0	115.4	264.6	113.1	368.9	393.6	488.1	619.5	452.7	240.7
1986	311.8	319.7	305.3	360.1	402.9	121.9	280.0	119.4	373.8	384.7	463.1	501.5	446.7	253.1
1987	324.5	333.0	318.5	374.4	421.8	128.1	291.5	124.8	387.3	380.7	454.3	503.0	438.8	257.9
1986: Jan	307.9	315.6	302.5	353.1	393.8	118.8	273.4	116.7	379.1	394.6	484.7	650.3	442.6	247.3
Feb	307.7	315.3	301.5	354.2	394.8	119.0	273.7	117.0	379.6	390.0	476.3	591.2	444.5	247.9
Mar	307.8	315.4	301.2	355.5	397.0	119.6	275.0	117.9	367.5	385.5	467.6	549.9	442.3	249.0
Apr	308.5	316.1	301.5	357.0	400.1	120.9	277.9	118.7	367.6	381.8	459.6	518.3	439.2	251.3
May	309.4	317.0	302.1	358.8	400.9	121.1	278.4	118.9	357.1	382.5	460.6	496.8	444.6	251.5
June	309.5	317.1	301.6	360.2	401.6	121.6	279.4	119.0	366.6	393.8	477.0	486.6	466.0	255.2
July	312.2	320.1	305.5	360.8	403.5	122.5	281.2	119.4	369.2	389.4	469.2	459.4	462.3	255.6
Aug	314.6	322.7	308.9	361.8	405.2	122.9	281.7	119.9	376.4	389.5	469.0	447.3	464.5	255.9
Sept	315.1	323.2	309.0	363.3	407.6	123.6	283.2	120.7	376.2	388.3	467.2	453.5	461.1	255.6
Oct	315.6	323.7	309.5	364.0	409.5	124.0	284.6	121.3	379.0	379.1	450.3	451.9	441.4	257.1
Nov	316.4	324.6	309.9	365.8	410.2	124.3	285.6	121.5	377.1	371.1	437.8	452.0	426.7	255.4
Dec	317.0	325.2	310.2	367.1	410.4	124.2	286.0	121.6	380.0	371.0	438.1	460.6	425.3	254.9
1987: Jan	320.5	328.9	315.2	368.6	412.3	125.3	287.1	122.0	382.1	373.7	443.7	487.9	428.8	254.9
Feb	321.6	330.1	316.6	369.6	414.0	125.8	288.0	122.5	381.9	374.8	445.1	503.2	428.9	255.6
Mar	321.6	330.0	315.8	370.9	415.9	126.4	288.3	123.0	383.4	374.9	444.6	500.6	428.7	256.2
Apr	322.5	331.0	316.9	371.5	418.0	127.1	288.8	123.6	382.4	374.2	442.0	500.5	425.9	257.0
May	324.0	332.5	318.8	372.3	419.2	127.3	289.4	124.0	381.9	377.5	448.7	497.7	433.3	257.2
June	325.4	334.1	320.4	373.8	420.2	127.9	289.6	124.2	385.0	387.6	470.8	498.6	456.8	256.4
July	325.1	333.6	319.1	374.9	422.1	129.3	291.2	124.4	392.4	388.1	468.9	497.9	454.8	258.6
Aug	325.4	333.8	319.0	375.9	425.1	130.1	293.1	125.4	391.3	391.1	473.6	502.3	459.4	259.9
Sept	326.4	334.9	319.8	377.4	426.2	129.8	294.5	126.0	390.5	389.8	471.6	501.0	457.4	259.3
Oct	326.9	335.3	319.9	378.4	428.6	129.4	295.4	127.1	390.9	381.3	452.6	507.0	436.6	260.2
Nov	326.7	335.1	319.0	379.6	429.2	129.2	295.5	127.4	393.2	378.2	445.9	518.8	428.4	260.3
Dec	328.1	336.7	321.0	380.4	430.4	129.1	297.2	128.0	392.7	376.9	444.3	520.2	426.6	259.5

---

[1] Includes alcoholic beverages, not shown separately.

[2] December 1982=100.

See next page for continuation of table.

Table B–59.—*Consumer price indexes, selected expenditure classes, 1946–87*—Continued

[1967=100, except as noted]

Year or month	Transportation								Medical care		
	Total	Private transportation						Public transportation	Total	Medical care commodities	Medical care services
		Total [3]	New cars	Used cars	Motor fuel [4]	Automobile maintenance and repair	Other				
1946	50.3	54.3	.....	.....	54.9	52.0	.....	34.4	44.4	76.2	40.1
1947	55.5	61.5	69.2	.....	62.2	56.4	.....	36.0	48.1	81.8	43.5
1948	61.8	68.2	75.6	.....	70.4	59.6	.....	40.7	51.1	86.1	46.4
1949	66.4	72.3	82.8	.....	72.3	61.1	.....	45.2	52.7	87.4	48.1
1950	68.2	72.5	83.4	.....	71.8	62.3	.....	48.9	53.7	88.5	49.2
1951	72.5	75.8	87.4	.....	73.9	67.0	.....	54.0	56.3	91.0	51.7
1952	77.3	80.8	94.9	.....	75.8	68.6	.....	57.5	59.3	91.8	55.0
1953	79.5	82.4	95.8	89.2	80.3	72.3	.....	61.3	61.4	92.6	57.0
1954	78.3	80.3	94.3	75.9	82.5	74.8	.....	65.5	63.4	93.7	58.7
1955	77.4	78.9	90.9	71.8	83.6	76.5	.....	67.4	64.8	94.7	60.4
1956	78.8	80.1	93.5	69.1	86.5	79.5	.....	70.0	67.2	96.7	62.8
1957	83.3	84.7	98.4	77.4	90.0	82.4	.....	72.7	69.9	99.3	65.5
1958	86.0	87.4	101.5	80.2	88.8	83.7	.....	76.1	73.2	102.8	68.7
1959	89.6	91.1	105.9	89.5	89.9	85.5	.....	78.3	76.4	104.4	72.0
1960	89.6	90.6	104.5	83.6	92.5	87.2	.....	81.0	79.1	104.5	74.9
1961	90.6	91.3	104.5	86.9	91.4	89.3	.....	84.6	81.4	103.3	77.7
1962	92.5	93.0	104.1	94.8	91.9	90.4	.....	87.4	83.5	101.7	80.2
1963	93.0	93.4	103.5	96.0	91.8	91.6	.....	88.5	85.6	100.8	82.6
1964	94.3	94.7	103.2	100.1	91.4	92.8	.....	90.1	87.3	100.5	84.6
1965	95.9	96.3	100.9	99.4	94.9	94.5	.....	91.9	89.5	100.2	87.3
1966	97.2	97.5	99.1	97.0	97.0	96.2	.....	95.2	93.4	100.5	92.0
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	103.2	103.0	102.8	([5])	101.4	105.5	103.4	104.6	106.1	100.2	107.3
1969	107.2	106.5	104.4	103.1	104.7	112.2	109.7	112.7	113.4	101.3	116.0
1970	112.7	111.1	107.6	104.3	105.6	120.6	119.2	128.5	120.6	103.6	124.2
1971	118.6	116.6	112.0	110.2	106.3	129.2	128.4	137.7	128.4	105.4	133.3
1972	119.9	117.5	111.0	110.5	107.6	135.1	129.1	143.4	132.5	105.6	138.2
1973	123.8	121.5	111.1	117.6	118.1	142.2	127.8	144.8	137.7	105.9	144.3
1974	137.7	136.6	117.5	122.6	159.9	156.8	132.4	148.0	150.5	109.6	159.1
1975	150.6	149.8	127.6	146.4	170.8	176.6	141.2	158.6	168.6	118.8	179.1
1976	165.5	164.6	135.7	167.9	177.9	189.7	163.1	174.2	184.7	126.0	197.1
1977	177.2	176.6	142.9	182.8	188.2	203.7	177.3	182.4	202.4	134.1	216.7
1978	185.5	185.0	153.8	186.5	196.3	220.6	184.6	187.8	219.4	143.5	235.4
1979	212.0	212.3	166.0	201.0	265.6	242.5	198.6	200.3	239.7	153.8	258.3
1980	249.7	249.2	179.3	208.1	369.1	268.3	222.6	251.6	265.9	168.1	287.4
1981	280.0	277.5	190.2	256.9	410.9	293.6	241.3	312.0	294.5	186.5	318.2
1982	291.5	287.5	197.6	296.4	389.4	315.8	257.8	346.0	328.7	205.7	356.0
1983	298.4	293.9	202.6	329.7	376.4	330.0	260.8	362.6	357.3	223.3	387.0
1984	311.7	306.6	208.5	375.7	370.7	341.5	273.3	385.2	379.5	239.7	410.3
1985	319.9	314.2	215.2	379.7	373.8	351.4	287.6	402.8	403.1	256.7	435.1
1986	307.5	299.5	224.4	363.2	292.1	363.1	303.9	426.4	433.5	273.6	468.6
1987	316.8	308.5	232.5	377.6	303.9	377.7	318.9	441.4	462.2	291.9	499.6
1986: Jan	323.9	317.3	219.9	374.1	373.3	357.9	297.7	419.6	418.2	264.5	451.9
Feb	319.2	312.2	220.4	370.7	351.5	358.9	299.2	422.2	422.3	267.4	456.2
Mar	309.6	302.1	220.3	367.2	308.5	359.3	301.5	421.2	425.8	269.4	460.1
Apr	303.3	295.3	221.2	364.8	279.5	360.6	301.6	422.2	428.0	271.3	462.3
May	305.7	297.8	223.0	363.6	289.3	361.3	301.3	423.7	429.7	272.3	464.2
June	308.6	300.8	224.2	362.5	299.4	362.1	303.0	425.4	432.0	273.3	466.8
July	304.7	296.5	224.7	360.3	280.2	363.4	304.5	428.0	434.8	275.4	469.8
Aug	301.3	292.8	224.7	358.0	265.9	364.3	304.5	428.0	437.5	276.0	473.0
Sept	302.2	293.7	224.5	359.5	271.1	365.0	302.3	428.5	439.7	276.7	475.7
Oct	302.6	294.1	227.1	360.6	263.2	365.7	307.6	428.7	442.3	277.5	478.8
Nov	304.3	295.8	230.7	361.0	260.9	368.4	311.6	431.7	444.6	278.2	481.5
Dec	304.8	295.9	232.2	356.6	261.9	370.7	312.0	437.5	446.8	280.8	483.4
1987: Jan	308.5	299.8	233.0	354.6	275.8	371.3	314.9	438.9	449.6	282.4	486.5
Feb	310.0	301.3	230.2	356.9	288.1	373.0	314.0	439.8	452.4	283.9	489.6
Mar	310.6	301.9	229.4	363.0	290.0	373.0	314.4	441.4	455.0	286.3	492.1
Apr	313.3	304.8	230.4	371.6	297.2	376.1	315.1	440.8	457.3	287.5	494.7
May	314.6	306.3	231.3	378.6	299.7	376.1	315.9	439.6	458.9	289.6	496.0
June	316.7	308.6	232.0	383.0	306.0	376.3	317.6	438.1	461.3	291.5	498.4
July	318.5	310.5	232.7	385.5	311.2	376.8	318.8	438.3	464.1	293.4	501.5
Aug	320.2	312.0	232.1	385.7	319.5	378.6	318.6	442.8	466.1	294.6	503.6
Sept	320.4	312.1	231.6	387.3	318.4	380.7	319.7	445.1	467.8	295.8	505.4
Oct	321.9	313.8	233.8	388.0	315.2	382.0	324.1	442.0	469.8	297.4	507.4
Nov	324.1	316.0	236.6	389.0	315.2	383.5	326.9	444.8	471.7	299.1	509.3
Dec	323.3	315.1	236.6	388.4	310.6	384.7	326.8	445.3	472.9	300.7	510.3

[3] Includes direct pricing of new trucks and motorcycles beginning September 1982.

[4] Includes direct pricing of diesel fuel and gasohol beginning September 1981.

[5] Not available.

Note.—Data beginning 1978 are for all urban consumers; earlier data are for urban wage earners and clerical workers. See also Note, Table B–58.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–60.—*Consumer price indexes, commodities, services, and special groups, 1946–87*

[1967=100]

Year or month	All items	Commodities					Services			Special indexes			
		All commodities	Food	Commodities less food			All services	Medical care services	Services less medical care	All items less food	All items less energy	All items less food and energy	Energy [1]
				All	Durable	Nondurable							
1946	58.5	62.4	58.1	68.1	74.1	62.9	49.1	40.1	....	59.4	....	....	....
1947	66.9	75.0	70.6	76.8	80.3	72.2	51.1	43.5	....	64.9	....	....	....
1948	72.1	80.4	76.6	82.7	86.2	77.8	54.3	46.4	....	69.6	....	....	....
1949	71.4	78.3	73.5	81.5	87.4	76.3	56.9	48.1	....	70.3	....	....	....
1950	72.1	78.8	74.5	81.4	88.4	76.2	58.7	49.2	....	71.1	....	....	....
1951	77.8	85.9	82.8	87.5	95.1	82.0	61.8	51.7	....	75.7	....	....	....
1952	79.5	87.0	84.3	88.3	96.4	82.4	64.5	55.0	....	77.5	....	....	....
1953	80.1	86.7	83.0	88.5	95.7	83.1	67.3	57.0	....	79.0	....	....	....
1954	80.5	85.9	82.8	87.5	93.3	83.5	69.5	58.7	....	79.5	....	....	....
1955	80.2	85.1	81.6	86.9	91.5	83.5	70.9	60.4	....	79.7	....	....	....
1956	81.4	85.9	82.2	87.8	91.5	85.3	72.7	62.8	....	81.1	....	....	....
1957	84.3	88.6	84.9	90.5	94.4	87.6	75.6	65.5	77.6	83.8	83.9	83.3	90.1
1958	86.6	90.6	88.5	91.5	95.9	88.2	78.5	68.7	80.4	85.7	86.3	85.2	90.3
1959	87.3	90.7	87.1	92.7	97.3	89.3	80.8	72.0	82.5	87.3	87.0	87.0	91.8
1960	88.7	91.5	88.0	93.1	96.7	90.7	83.5	74.9	85.2	88.8	88.3	88.3	94.2
1961	89.6	92.0	89.1	93.4	96.6	91.2	85.2	77.7	86.7	89.7	89.3	89.3	94.4
1962	90.6	92.8	89.9	94.1	97.6	91.8	86.8	80.2	88.1	90.8	90.4	90.5	94.7
1963	91.7	93.6	91.2	94.8	97.9	92.7	88.5	82.6	89.6	92.0	91.6	91.6	95.0
1964	92.9	94.6	92.4	95.6	98.8	93.5	90.2	84.6	91.2	93.2	92.9	93.0	94.6
1965	94.5	95.7	94.4	96.2	98.4	94.8	92.2	87.3	93.2	94.5	94.3	94.3	96.3
1966	97.2	98.2	99.1	97.5	98.5	97.0	95.8	92.0	96.4	96.7	97.3	96.6	97.8
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	104.2	103.7	103.6	103.7	103.1	104.1	105.2	107.3	104.9	104.4	104.4	104.6	101.5
1969	109.8	108.4	108.9	108.1	107.0	108.8	112.5	116.0	112.0	110.1	110.3	110.7	104.2
1970	116.3	113.5	114.9	112.5	111.8	113.1	121.6	124.2	121.3	116.7	117.0	117.6	107.0
1971	121.3	117.4	118.4	116.8	116.5	117.0	128.4	133.3	127.7	122.1	122.0	123.1	111.2
1972	125.3	120.9	123.5	119.4	118.9	119.8	133.3	138.2	132.6	125.8	126.1	126.9	114.3
1973	133.1	129.9	141.4	123.5	121.9	124.8	139.1	144.3	138.3	130.7	133.8	131.3	123.5
1974	147.7	145.5	161.7	136.6	130.6	140.9	152.1	159.1	151.0	143.7	146.9	142.2	159.7
1975	161.2	158.4	175.4	149.1	145.5	151.7	166.6	179.1	164.7	157.1	160.2	155.3	176.6
1976	170.5	165.2	180.8	156.6	154.3	158.3	180.4	197.1	177.7	167.5	169.2	165.5	189.3
1977	181.5	174.7	192.2	165.1	163.2	166.5	194.3	216.7	190.6	178.4	179.8	175.8	207.3
1978	195.4	187.1	211.4	174.7	173.9	174.3	210.9	235.4	206.9	191.2	193.8	188.7	220.4
1979	217.4	208.4	234.5	195.1	191.1	198.7	234.2	258.3	230.1	213.0	213.1	207.0	275.9
1980	246.8	233.9	254.6	222.0	210.4	235.2	270.3	287.4	266.6	244.0	238.0	232.8	361.1
1981	272.4	253.6	274.6	241.2	227.1	257.5	305.7	318.2	302.2	270.6	261.7	257.1	410.0
1982	289.1	263.8	285.7	250.9	241.1	261.6	333.3	356.0	328.6	288.4	279.3	276.1	416.1
1983	298.4	271.5	291.7	259.0	253.0	266.3	344.9	387.0	338.1	298.3	289.3	287.0	419.3
1984	311.1	280.7	302.9	267.0	266.5	270.8	363.0	410.3	355.6	311.3	302.9	301.2	423.6
1985	322.2	286.7	309.8	272.5	270.7	277.2	381.5	435.1	373.3	323.3	314.8	314.4	426.5
1986	328.4	283.9	319.7	263.4	270.2	262.2	400.5	468.6	390.6	328.6	327.0	327.1	370.3
1987	340.4	293.0	333.0	270.2	274.3	270.9	417.1	499.6	405.7	340.1	340.4	340.5	371.7
1986: Jan	328.4	290.1	315.6	274.7	271.4	280.4	391.7	451.9	382.7	329.5	321.8	321.6	424.7
Feb	327.5	287.4	315.3	270.9	270.5	274.5	393.3	456.2	384.0	328.5	322.3	322.3	408.9
Mar	326.0	283.7	315.4	265.2	269.7	265.6	394.9	460.1	385.4	326.6	323.3	323.6	381.3
Apr	325.3	281.2	316.1	261.2	269.2	259.2	396.8	462.3	387.2	325.7	324.4	324.8	361.8
May	326.3	282.1	317.0	262.1	269.6	260.5	397.9	464.2	388.3	326.7	325.0	325.3	367.6
June	327.9	282.8	317.1	263.0	269.9	261.8	401.0	466.8	391.3	328.6	325.5	325.9	380.6
July	328.0	281.9	320.1	260.2	269.6	257.3	402.3	469.8	392.5	328.0	326.9	326.9	366.5
Aug	328.6	281.9	322.7	259.0	269.0	255.6	403.7	473.0	393.6	328.1	328.3	327.9	358.6
Sept	330.2	283.5	323.2	261.1	269.3	258.9	405.5	475.7	395.4	330.0	330.0	329.9	360.6
Oct	330.5	283.6	323.7	260.9	270.5	257.8	406.1	478.8	395.7	330.2	331.4	331.6	348.6
Nov	330.8	284.0	324.6	261.2	271.8	257.4	406.1	481.5	395.4	330.4	332.3	332.5	341.7
Dec	331.1	284.2	325.2	261.2	271.7	257.5	406.6	483.4	395.8	330.6	332.6	332.8	342.4
1987: Jan	333.1	286.3	328.9	262.5	272.4	259.2	408.6	486.5	397.6	332.2	334.0	333.6	352.2
Feb	334.4	287.7	330.1	264.0	271.2	262.6	409.9	489.6	398.8	333.6	334.9	334.5	359.2
Mar	335.9	289.5	330.0	266.5	271.7	266.4	411.2	492.1	400.0	335.4	336.5	336.4	360.0
Apr	337.7	291.4	331.0	268.9	273.0	269.6	412.8	494.7	401.5	337.3	338.2	338.3	362.4
May	338.7	292.3	332.5	269.4	273.6	270.0	414.2	496.0	402.9	338.3	339.0	338.9	366.9
June	340.1	292.8	334.1	269.5	274.2	269.8	416.7	498.4	405.4	339.6	339.5	339.1	380.6
July	340.8	292.8	333.6	269.6	274.9	269.5	418.3	501.5	406.8	340.5	340.1	339.9	382.4
Aug	342.7	294.2	333.8	271.6	274.6	273.1	420.7	503.6	409.3	342.7	341.6	341.7	388.9
Sept	344.4	296.1	334.9	273.8	274.6	276.8	422.4	505.4	410.9	344.6	343.6	343.9	387.4
Oct	345.3	297.3	335.3	275.4	276.0	278.4	423.1	507.4	411.5	345.6	345.4	346.1	376.7
Nov	345.8	297.9	335.1	276.3	277.8	278.9	423.4	509.3	411.7	346.2	346.2	347.0	373.5
Dec	345.7	297.2	336.7	274.5	277.6	276.0	424.0	510.3	412.2	345.7	346.3	346.8	370.4

[1] Household fuels—gas (piped), electricity, fuel oil, etc.—and motor fuel. Motor oil, coolant, etc. also included through 1982.

Note.—Data beginning 1978 are for all urban consumers; earlier data are for urban wage earners and clerical workers. See also Note, Table B–58.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B-61.—*Changes in special consumer price indexes, 1958–87*

[Percent change]

Year or month	All items		All items less food		All items less energy		All items less food and energy		All items less food, energy, and shelter	
	Dec. to Dec.[1]	Year to year	Dec. to Dec.[1]	Year to year	Dec. to Dec.[1]	Year to year	Dec. to Dec.[1]	Year to year	Dec. to Dec.[1]	Year to year
1958	1.8	2.7	1.6	2.3	1.9	2.9	1.8	2.3	....	....
1959	1.5	.8	2.3	1.9	1.4	.8	2.2	2.1	....	....
1960	1.5	1.6	1.0	1.7	1.4	1.5	.8	1.5	....	....
1961	.7	1.0	1.1	1.0	.8	1.1	1.5	1.1	....	....
1962	1.2	1.1	1.2	1.2	1.2	1.2	1.1	1.3	....	....
1963	1.6	1.2	1.6	1.3	1.8	1.3	1.8	1.2	....	....
1964	1.2	1.3	1.0	1.3	1.3	1.4	1.2	1.5	....	....
1965	1.9	1.7	1.6	1.4	1.9	1.5	1.5	1.4	....	....
1966	3.4	2.9	3.3	2.3	3.5	3.2	3.3	2.4	....	....
1967	3.0	2.9	3.5	3.4	3.1	2.8	3.9	3.5	....	....
1968	4.7	4.2	4.9	4.4	4.9	4.4	5.1	4.6	4.6	4.6
1969	6.1	5.4	5.7	5.5	6.4	5.7	6.1	5.8	5.0	4.8
1970	5.5	5.9	6.5	6.0	5.6	6.1	6.6	6.2	5.7	5.1
1971	3.4	4.3	3.1	4.6	3.3	4.3	3.1	4.7	3.2	4.9
1972	3.4	3.3	3.0	3.0	3.5	3.4	3.0	3.1	2.6	2.4
1973	8.8	6.2	5.6	3.9	8.3	6.1	4.7	3.5	3.5	3.0
1974	12.2	11.0	12.2	9.9	11.5	9.8	11.3	8.3	11.3	7.6
1975	7.0	9.1	7.1	9.3	6.7	9.1	6.7	9.2	6.4	8.9
1976	4.8	5.8	6.2	6.6	4.6	5.6	6.1	6.6	7.0	7.0
1977	6.8	6.5	6.3	6.5	6.8	6.3	6.4	6.2	5.2	6.0
1978	9.0	7.7	8.5	7.2	9.2	7.8	8.5	7.3	6.5	5.7
1979	13.3	11.3	14.0	11.4	11.1	10.0	11.3	9.7	7.2	6.9
1980	12.4	13.5	12.9	14.6	11.7	11.7	12.1	12.5	9.9	8.8
1981	8.9	10.4	9.9	10.9	8.6	10.0	9.6	10.4	9.4	9.5
1982	3.9	6.1	4.0	6.6	4.2	6.7	4.5	7.4	6.1	7.7
1983	3.8	3.2	4.1	3.4	4.4	3.6	4.9	3.9	5.0	5.2
1984	4.0	4.3	4.0	4.4	4.5	4.7	4.7	4.9	4.4	5.0
1985	3.8	3.6	4.0	3.9	4.0	3.9	4.4	4.4	3.7	3.8
1986	1.1	1.9	.5	1.6	3.8	3.9	3.8	4.0	3.4	3.4
1987	4.4	3.7	4.6	3.5	4.1	4.1	4.2	4.1	3.9	3.8
	Change from preceding month									
	Unadjusted	Seasonally adjusted	Unadjusted	Seasonally adjusted	Unadjusted	Seasonally adjusted	Unadjusted	Seasonally adjusted	Unadjusted	Seasonally adjusted
1986: Jan	0.3	0.3	0.2	0.4	0.4	0.4	0.3	0.5	0.2	0.5
Feb	−.3	−.3	−.3	−.3	.2	.2	.2	.2	.2	.2
Mar	−.5	−.4	−.6	−.5	.3	.3	.4	.4	.3	.2
Apr	−.2	−.3	−.3	−.4	.3	.3	.4	.3	.2	.1
May	.3	.2	.3	.2	.2	.2	.2	.2	.1	.2
June	.5	.4	.6	.5	.2	.3	.2	.3	.2	.3
July	.0	.0	−.2	−.2	.4	.5	.3	.4	.2	.4
Aug	.2	.2	.0	0	.4	.4	.3	.3	.3	.2
Sept	.5	.3	.6	.3	.5	.3	.6	.3	.6	.1
Oct	.1	.2	.1	.1	.4	.4	.5	.4	.5	.4
Nov	.1	.2	.1	.2	.3	.3	.3	.3	.3	.3
Dec	.1	.2	.1	.2	.1	.2	.1	.2	.1	.2
1987: Jan	.6	.7	.5	.7	.4	.5	.2	.5	.1	.5
Feb	.4	.4	.4	.4	.3	.3	.3	.3	.2	.1
Mar	.4	.4	.5	.5	.5	.4	.6	.5	.6	.5
Apr	.5	.4	.6	.5	.5	.4	.6	.5	.6	.6
May	.3	.3	.3	.3	.2	.3	.2	.3	.1	.3
June	.4	.4	.4	.3	.1	.3	.1	.2	−.0	.2
July	.2	.2	.3	.3	.2	.2	.2	.3	.1	.4
Aug	.6	.5	.6	.5	.4	.4	.5	.4	.4	.3
Sept	.5	.2	.6	.1	.6	.2	.6	.2	.9	.2
Oct	.3	.4	.3	.4	.5	.5	.6	.5	.7	.5
Nov	.1	.3	.2	.3	.2	.3	.3	.3	.4	.4
Dec	−.0	.1	−.1	.0	.0	.2	−.1	.1	−.3	−.1

[1] Changes from December to December are based on unadjusted indexes.

Note.—Data beginning 1978 are for all urban consumers; earlier data are for urban wage earners and clerical workers. See also Note, Table B-58.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–62.—*Changes in consumer price indexes, commodities and services, 1929–87*

[Percent change]

Year	All items		Commodities						Services				Energy [2]	
			Total		Food		Commodities less food		Total		Medical care services			
	Dec. to Dec. [1]	Year to year	Dec. to Dec. [1]	Year to year	Dec. to Dec. [1]	Year to year	Dec. to Dec. [1]	Year to year	Dec. to Dec. [1]	Year to year	Dec. to Dec. [1]	Year to year	Dec. to Dec. [1]	Year to year
1929	0.2	0	......	......	2.3	1.3	......	......	......	......	......	......	......	......
1933	.5	−5.1	......	......	7.0	−2.9	......	......	......	......	......	......	......	......
1939	−.5	−1.4	−1.0	−2.0	−2.5	−2.8	0.2	−1.6	0.2	0.2	0.3	0.3	......	......
1940	1.0	1.0	1.2	1.0	2.6	1.7	.4	.6	.7	.2	0	0	......	......
1941	9.7	5.0	13.5	6.7	16.4	9.1	10.8	5.0	2.5	1.4	1.5	.6	......	......
1942	9.3	10.7	13.0	14.5	17.5	17.4	6.4	11.1	2.0	3.2	3.9	3.1	......	......
1943	3.2	6.1	4.0	8.9	3.1	11.5	5.4	4.3	2.6	1.8	5.8	5.0	......	......
1944	2.1	1.7	2.2	1.3	.2	−1.4	5.0	5.5	1.7	2.4	2.8	4.2	......	......
1945	2.3	2.3	2.9	2.9	3.0	2.2	3.0	4.1	1.0	1.5	2.9	2.7	......	......
1946	18.2	8.5	24.9	10.8	31.5	14.6	12.9	6.2	3.5	1.9	8.9	5.8	......	......
1947	9.0	14.4	10.4	20.2	11.2	21.5	9.1	12.8	5.2	4.1	6.5	8.5	......	......
1948	2.7	7.8	1.7	7.2	−.8	8.5	5.3	7.7	6.1	6.3	7.0	6.7	......	......
1949	−1.8	−1.0	−4.1	−2.6	−3.7	−4.0	−4.8	−1.5	3.6	4.8	2.1	3.7	......	......
1950	5.8	1.0	7.7	.6	9.6	1.4	5.7	−.1	3.6	3.2	3.3	2.3	......	......
1951	5.9	7.9	5.9	9.0	7.4	11.1	4.6	7.5	5.2	5.3	5.8	5.1	......	......
1952	.9	2.2	−.7	1.3	−1.1	1.8	−.5	.9	4.6	4.4	5.5	6.4	......	......
1953	.6	.8	−.6	−.3	−1.3	−1.5	.2	.2	4.2	4.3	3.6	3.6	......	......
1954	−.5	.5	−1.4	−.9	−1.6	−.2	−1.4	−1.1	1.9	3.3	2.6	3.0	......	......
1955	.4	−.4	−.4	−.9	−.9	−1.4	0	−.7	2.3	2.0	3.2	2.9	......	......
1956	2.9	1.5	2.6	.9	3.1	.7	2.5	1.0	3.1	2.5	4.1	4.0	......	......
1957	3.0	3.6	2.6	3.1	2.8	3.3	2.2	3.1	4.5	4.0	4.5	4.3	......	......
1958	1.8	2.7	1.3	2.3	2.2	4.2	.8	1.1	2.7	3.8	4.9	4.9	−0.7	0.2
1959	1.5	.8	.6	.1	−.8	−1.6	1.5	1.3	3.7	2.9	4.6	4.8	4.3	1.7
1960	1.5	1.6	1.1	.9	3.1	1.0	−.3	.4	2.7	3.3	3.8	4.0	1.5	2.6
1961	.7	1.0	0	.5	−.9	1.3	.6	.3	1.9	2.0	3.5	3.7	−1.1	.2
1962	1.2	1.1	1.0	.9	1.5	.9	.7	.7	1.7	1.9	3.0	3.2	2.1	.3
1963	1.6	1.2	1.4	.9	1.9	1.4	1.2	.7	2.3	2.0	2.6	3.0	−.8	.3
1964	1.2	1.3	.8	1.1	1.4	1.3	.4	.8	1.8	1.9	2.6	2.4	−.2	−.4
1965	1.9	1.7	1.6	1.2	3.4	2.2	.7	.6	2.6	2.2	3.5	3.2	2.0	1.8
1966	3.4	2.9	2.5	2.6	3.9	5.0	1.9	1.4	4.9	3.9	8.1	5.4	1.8	1.6
1967	3.0	2.9	2.5	1.8	1.2	.9	3.1	2.6	4.0	4.4	7.9	8.7	1.4	2.2
1968	4.7	4.2	3.8	3.7	4.3	3.6	3.7	3.7	6.1	5.2	7.4	7.3	1.7	1.5
1969	6.1	5.4	5.5	4.5	7.2	5.1	4.5	4.2	7.4	6.9	7.0	8.1	3.1	2.7
1970	5.5	5.9	4.0	4.7	2.2	5.5	4.8	4.1	8.2	8.1	8.3	7.1	4.5	2.7
1971	3.4	4.3	2.9	3.4	4.3	3.0	2.3	3.8	4.1	5.6	5.3	7.3	3.1	3.9
1972	3.4	3.3	3.4	3.0	4.7	4.3	2.5	2.2	3.6	3.8	3.8	3.7	2.8	2.8
1973	8.8	6.2	10.4	7.4	20.1	14.5	5.0	3.4	6.2	4.4	5.8	4.4	16.8	8.0
1974	12.2	11.0	12.7	12.0	12.2	14.4	13.2	10.6	11.3	9.3	13.3	10.3	21.6	29.3
1975	7.0	9.1	6.3	8.9	6.5	8.5	6.2	9.2	8.1	9.5	10.3	12.6	11.6	10.6
1976	4.8	5.8	3.3	4.3	.6	3.1	5.1	5.0	7.3	8.3	10.7	10.1	6.9	7.2
1977	6.8	6.5	6.1	5.8	8.0	6.3	4.9	5.4	7.9	7.7	9.0	9.9	7.2	9.5
1978	9.0	7.7	8.9	7.1	11.8	10.0	7.7	5.8	9.3	8.5	9.2	8.6	8.0	6.3
1979	13.3	11.3	13.0	11.4	10.2	10.9	14.3	11.7	13.7	11.0	10.6	9.7	37.4	25.2
1980	12.4	13.5	11.1	12.2	10.2	8.6	11.5	13.8	14.2	15.4	10.0	11.3	18.1	30.9
1981	8.9	10.4	6.0	8.4	4.3	7.9	6.7	8.6	13.0	13.1	12.7	10.7	11.9	13.5
1982	3.9	6.1	3.6	4.0	3.1	4.0	3.8	4.0	4.3	9.0	11.2	11.9	1.3	1.5
1983	3.8	3.2	2.9	2.9	2.6	2.1	3.1	3.2	4.8	3.5	6.1	8.7	−.5	.8
1984	4.0	4.3	2.6	3.4	3.8	3.8	2.0	3.1	5.4	5.2	5.8	6.0	.2	1.0
1985	3.8	3.6	2.5	2.1	2.7	2.3	2.4	2.1	5.1	5.1	6.8	6.0	1.8	.7
1986	1.1	1.9	−2.0	−1.0	3.8	3.2	−5.3	−3.3	4.4	5.0	7.9	7.7	−19.7	−13.2
1987	4.4	3.7	4.6	3.2	3.5	4.2	5.1	2.6	4.3	4.1	5.6	6.6	8.2	.4

[1] Changes from December to December are based on unadjusted indexes.

[2] Household fuels—gas (piped) electricity, fuel oil, etc.—and motor fuel. Motor oil, coolant, etc. also included through 1982.

Note.—Data beginning 1978 are for all urban consumers; earlier data are for urban wage earners and clerical workers. See also Note, Table B–58.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–63.—*Producer price indexes by stage of processing, 1947–87*

[1967=100]

Year or month	Finished goods									
	Total finished goods	Consumer foods			Finished goods excluding consumer foods					Total finished consumer goods
		Total	Crude	Processed	Total	Consumer goods			Capital equipment	
						Total	Durable	Nondurable		
1947	74.0	82.8	99.4	80.2	...	79.0	74.6	80.7	55.4	80.5
1948	79.9	90.4	107.1	87.6	...	84.0	79.7	85.8	60.4	86.5
1949	77.6	83.1	101.3	80.1	...	82.2	81.8	82.3	63.4	82.5
1950	79.0	84.7	92.2	83.4	...	83.5	82.7	83.6	64.9	83.9
1951	86.5	95.2	105.9	93.2	...	89.5	88.2	90.0	71.2	91.8
1952	86.0	94.3	112.8	91.3	...	88.3	88.9	87.8	72.4	90.7
1953	85.1	89.4	105.2	86.7	...	89.1	89.6	88.6	73.6	89.2
1954	85.3	88.7	94.7	87.6	...	89.4	90.3	88.9	74.5	89.1
1955	85.5	86.5	98.8	84.4	...	90.1	91.2	89.4	76.7	88.5
1956	87.9	86.3	98.7	84.3	...	92.3	94.3	91.1	82.4	89.8
1957	91.1	89.3	97.4	87.9	...	94.6	97.1	93.2	87.5	92.4
1958	93.2	94.5	103.5	93.1	...	94.7	98.4	92.6	89.8	94.4
1959	93.0	90.1	94.3	89.5	...	95.9	99.6	94.0	91.5	93.6
1960	93.7	92.1	100.6	90.7	...	96.3	99.2	94.7	91.7	94.5
1961	93.7	91.7	96.1	90.9	...	96.2	98.8	94.7	91.8	94.3
1962	94.0	92.5	97.0	91.7	...	96.0	98.3	94.8	92.2	94.6
1963	93.7	91.4	95.5	90.7	...	96.0	97.8	95.1	92.4	94.1
1964	94.1	91.9	98.2	90.8	...	95.9	98.2	94.8	93.3	94.3
1965	95.7	95.4	98.6	94.9	...	96.6	97.9	95.9	94.4	96.1
1966	98.8	101.6	104.8	101.0	...	98.1	98.5	97.8	96.8	99.4
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	102.8	103.6	107.5	103.0	102.6	102.1	102.2	102.2	103.5	102.7
1969	106.6	110.0	116.0	108.9	105.4	104.6	104.0	105.0	106.9	106.6
1970	110.3	113.5	116.3	113.1	109.1	107.7	106.9	108.3	112.0	109.9
1971	113.7	115.3	115.8	115.1	113.1	111.4	110.8	111.7	116.6	112.9
1972	117.2	121.7	121.2	121.7	115.4	113.5	113.3	113.6	119.5	116.6
1973	127.9	146.4	160.7	143.9	120.1	118.6	115.4	120.5	123.5	129.2
1974	147.5	166.9	180.8	164.6	139.3	138.6	125.9	146.8	141.0	149.3
1975	163.4	181.0	181.2	181.3	156.2	153.1	138.2	163.0	162.5	163.6
1976	170.6	180.4	193.9	177.8	166.1	162.6	144.5	174.8	173.4	169.7
1977	181.7	189.9	201.0	187.3	177.7	174.3	152.8	189.3	184.6	180.7
1978	195.9	207.2	216.8	204.6	190.7	186.7	166.9	200.0	199.2	194.9
1979	217.7	226.2	233.1	223.8	213.3	211.5	183.2	231.3	216.5	217.9
1980	247.0	239.5	237.2	237.8	247.8	250.8	206.2	283.9	239.8	248.9
1981	269.8	253.6	263.8	250.6	273.3	276.5	218.6	319.6	264.3	271.3
1982	280.7	259.3	252.7	257.7	285.8	287.8	226.7	333.6	279.4	281.0
1983	285.2	261.8	258.7	260.0	290.8	291.4	233.1	335.3	287.2	284.6
1984	291.1	273.3	281.6	270.3	294.8	294.1	236.8	337.3	294.0	290.3
1985	293.7	271.2	260.0	270.0	299.0	297.3	241.5	339.3	300.5	291.8
1986	289.7	278.1	266.7	276.7	291.1	283.5	246.8	311.2	306.4	284.9
1987 [1]	295.7	283.9	271.9	282.4	297.1	289.7	252.7	316.4	312.1	291.0
1986: Jan	296.0	275.0	268.9	273.2	300.7	298.3	243.5	339.6	303.9	293.8
Feb	291.9	272.0	245.9	271.8	296.3	291.8	243.9	328.0	304.3	288.4
Mar	288.0	271.6	250.0	271.1	291.2	284.6	243.7	315.4	304.3	283.4
Apr	287.2	271.9	265.3	270.1	289.9	282.2	245.7	309.8	305.6	281.9
May	288.9	274.8	270.6	272.9	291.2	284.0	245.5	313.0	305.7	284.1
June	289.3	275.1	255.2	274.4	291.6	284.4	245.9	313.5	306.1	284.5
July	287.6	280.4	262.3	279.5	287.4	278.3	246.2	302.6	306.4	282.3
Aug	288.1	284.0	268.9	282.9	286.8	277.5	245.8	301.6	306.2	283.0
Sept	287.3	282.9	268.6	281.7	286.1	277.4	241.7	304.5	303.9	282.5
Oct	290.7	283.6	280.2	281.5	290.4	281.0	253.5	301.9	309.9	285.2
Nov	290.7	283.1	284.0	280.7	290.7	281.2	253.5	302.2	310.4	285.1
Dec	290.4	282.9	280.9	280.7	290.4	280.8	252.8	302.1	310.1	284.8
1987: Jan	291.8	280.1	263.2	279.0	293.2	284.4	253.2	307.7	311.2	286.2
Feb	292.3	280.8	272.5	279.1	293.6	285.3	250.7	310.5	310.7	287.1
Mar	292.6	280.3	277.0	278.2	294.3	286.3	250.6	312.2	310.5	287.5
Apr	294.9	283.2	267.6	282.0	296.3	288.6	252.5	314.7	311.8	290.1
May	295.8	286.6	265.6	285.9	296.3	288.6	252.1	314.9	311.8	291.3
June	296.2	286.7	271.3	285.5	296.7	289.5	252.1	316.3	311.4	291.9
July	297.4	287.5	276.7	285.9	298.1	291.4	252.3	319.3	311.7	293.4
Aug [1]	297.3	284.0	246.6	284.5	299.3	292.9	251.4	322.3	312.0	293.2
Sept	296.7	286.0	266.5	285.2	297.7	291.1	249.4	320.5	311.0	292.7
Oct	298.2	284.1	263.7	283.3	300.5	293.5	257.6	319.4	314.7	293.5
Nov	298.1	284.9	309.9	280.6	300.1	293.0	256.0	319.7	314.3	293.6
Dec	296.8	282.2	281.8	279.8	299.2	291.8	254.3	318.8	314.2	291.8

See next page for continuation of table.

TABLE B-63.—*Producer price indexes by stage of processing, 1947–87*—Continued

[1967=100]

Year or month	Intermediate materials, supplies, and components								Crude materials for further processing				
	Total	Foods and feeds [2]	Other	Materials and components		Processed fuels and lubricants	Containers	Supplies	Total	Foodstuffs and feedstuffs	Other		
				For manufacturing	For construction						Total	Fuel	Other
1947	72.4	....	70.0	72.1	66.0	85.5	66.8	77.5	101.2	111.7	....	66.6	90.6
1948	78.3	....	76.1	77.8	73.1	96.9	69.8	81.0	110.9	120.8	....	78.7	100.7
1949	75.2	....	74.2	74.5	73.2	88.2	70.1	76.3	96.0	100.3	....	78.3	91.6
1950	78.6	....	77.7	78.1	77.0	89.9	72.0	78.9	104.6	107.6	....	77.9	104.7
1951	88.1	....	87.0	88.5	84.3	93.9	84.5	88.8	120.1	124.5	....	79.4	120.7
1952	85.5	....	84.3	84.8	83.7	92.8	79.9	88.8	110.3	117.2	....	79.9	104.6
1953	86.0	....	85.3	86.2	85.1	93.4	80.0	84.3	101.9	104.9	....	82.7	100.1
1954	86.5	....	85.7	86.3	85.5	93.3	81.5	86.3	101.0	104.9	....	79.0	98.2
1955	88.1	....	88.3	88.4	88.9	93.3	82.6	84.8	97.1	95.1	....	78.8	103.8
1956	92.0	....	92.6	92.6	93.5	96.2	88.6	87.1	97.6	93.1	....	84.4	107.6
1957	94.1	....	95.0	94.8	94.0	101.9	92.5	88.0	99.8	97.2	....	89.2	106.2
1958	94.3	....	94.8	95.2	94.0	96.0	94.7	90.0	102.0	103.0	....	90.3	102.2
1959	95.6	....	96.4	96.5	96.6	95.6	94.2	91.2	99.4	96.2	....	91.9	105.8
1960	95.6	....	96.8	96.5	95.9	98.2	95.5	90.7	97.0	95.1	....	92.8	101.4
1961	95.0	....	95.5	95.3	94.6	99.4	94.7	91.8	96.5	93.8	....	92.6	102.5
1962	94.9	....	95.3	94.7	94.2	99.0	95.9	93.8	97.5	95.7	....	92.1	102.0
1963	95.2	....	95.0	94.9	94.5	98.1	94.7	95.2	95.4	92.9	....	93.2	100.7
1964	95.5	....	95.6	95.9	95.4	96.0	94.0	94.3	94.5	90.8	....	92.8	102.4
1965	96.8	....	96.9	97.4	96.2	97.4	95.8	95.2	99.3	97.1	....	93.5	104.5
1966	99.2	....	98.9	99.3	98.8	99.2	98.4	99.4	105.7	105.9	....	96.3	106.7
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	102.3	99.4	102.5	102.2	105.0	97.6	102.4	101.0	101.6	101.3	102.2	102.3	102.1
1969	105.8	102.7	106.1	105.8	110.8	98.5	106.3	102.8	108.4	109.3	106.8	106.6	106.9
1970	109.9	109.1	109.9	110.0	112.6	105.0	111.4	108.0	112.3	112.0	112.7	122.6	109.8
1971	114.1	111.7	114.3	112.8	119.7	115.2	116.6	111.0	115.1	114.2	117.0	139.0	110.7
1972	118.7	118.5	118.9	117.0	126.2	118.9	121.9	115.6	127.6	127.5	128.0	148.7	121.9
1973	131.6	168.4	128.1	127.7	136.7	131.5	129.2	140.6	174.0	180.0	162.5	164.5	161.5
1974	162.9	200.2	159.5	162.2	161.6	199.1	152.2	154.5	196.1	189.4	208.9	219.4	205.4
1975	180.0	195.3	178.6	178.7	176.4	233.0	171.4	168.1	196.9	191.8	206.9	271.5	188.3
1976	189.1	185.3	189.4	185.4	188.4	250.1	180.2	179.0	202.7	190.2	228.5	305.3	206.7
1977	201.5	190.5	202.3	195.4	203.4	282.5	188.3	188.7	209.2	192.1	245.0	372.1	212.2
1978	215.6	203.1	216.5	208.7	224.7	295.3	202.8	198.5	234.4	216.2	272.3	426.8	233.1
1979	243.2	226.1	244.4	234.4	247.4	364.8	226.8	218.2	274.3	247.9	330.0	507.6	284.5
1980	280.3	252.6	282.3	265.7	268.3	503.0	254.5	244.5	304.6	259.2	401.0	615.0	346.1
1981	306.0	250.3	310.1	286.1	287.6	595.4	276.1	263.8	329.0	257.4	482.3	751.2	413.7
1982	310.4	239.4	315.7	289.8	293.7	591.7	285.6	272.1	319.5	247.8	473.9	886.1	376.8
1983	312.3	247.9	317.1	293.4	301.8	564.8	286.6	277.1	323.6	252.2	477.4	931.5	372.2
1984	320.0	253.1	325.0	301.8	310.3	566.2	302.3	283.4	330.8	259.5	484.5	931.3	380.5
1985	318.7	232.8	325.0	299.5	315.2	548.9	311.2	284.2	306.1	235.0	459.2	909.6	355.3
1986	307.6	230.3	313.3	296.1	317.4	430.2	314.9	287.3	280.3	231.0	386.8	817.2	286.4
1987 [1]	315.2	237.3	320.9	305.1	322.5	434.1	326.9	293.1	299.2	238.3	416.4	744.4	333.4
1986: Jan	317.4	232.6	323.6	297.1	316.2	540.8	311.2	286.6	301.0	231.7	450.6	871.9	352.4
Feb	313.5	228.9	319.7	296.5	316.5	500.8	310.9	286.4	289.0	227.2	422.7	855.6	321.8
Mar	309.5	227.8	315.5	296.4	317.0	453.4	312.3	286.8	281.1	224.4	403.9	891.8	290.5
Apr	307.1	227.0	313.0	295.5	318.3	428.5	312.8	287.2	273.7	220.3	389.4	865.4	278.8
May	306.7	229.3	312.4	295.4	318.3	424.2	313.6	287.1	279.4	229.9	386.9	859.5	277.1
June	306.8	229.0	312.5	295.1	317.8	426.7	314.0	287.3	276.9	227.1	384.8	837.4	279.5
July	304.8	230.3	310.4	295.6	317.9	401.1	314.6	287.2	277.7	234.4	370.8	792.3	272.6
Aug	304.5	232.1	309.9	296.0	317.6	395.0	316.2	287.1	276.3	238.1	358.3	783.9	259.8
Sept	306.1	233.2	311.5	296.2	317.6	409.1	317.4	288.0	275.4	233.5	365.6	757.2	273.7
Oct	304.8	230.3	310.4	296.4	317.3	394.9	318.1	287.5	277.2	235.0	367.9	761.8	275.4
Nov	304.8	231.0	310.3	296.4	317.5	392.8	319.0	288.0	279.2	236.8	370.3	769.8	276.6
Dec	305.0	231.5	310.5	296.4	316.9	395.5	319.2	288.2	277.0	233.5	370.6	760.2	278.9
1987: Jan	307.0	229.5	312.8	297.8	317.1	406.7	320.7	289.0	284.2	227.6	394.2	754.6	306.5
Feb	308.9	230.0	314.7	298.7	317.9	418.5	323.6	289.5	287.2	229.9	398.5	743.4	313.3
Mar	309.3	227.6	315.3	299.5	318.7	416.0	324.9	289.6	288.6	229.6	402.0	763.9	313.6
Apr	311.0	231.9	316.9	301.4	319.3	421.3	325.4	290.5	295.3	240.1	405.3	759.5	318.1
May	313.1	240.4	318.5	303.2	319.9	429.3	325.5	292.0	302.9	251.7	409.4	745.5	325.3
June	315.2	241.1	320.7	304.5	320.9	440.8	326.2	292.8	303.7	247.0	416.8	744.5	333.8
July	316.9	241.2	322.6	305.8	322.4	450.0	326.0	293.2	306.8	243.8	427.7	743.2	346.4
Aug [1]	318.2	238.3	324.2	306.6	323.6	457.6	326.5	293.4	308.4	240.6	435.0	745.4	354.2
Sept	318.9	241.4	324.6	308.0	325.4	450.1	329.6	294.5	305.4	238.8	430.3	748.1	348.4
Oct	320.0	240.5	325.9	310.7	326.8	442.0	331.0	295.9	304.3	237.7	428.9	734.1	349.4
Nov	321.3	242.0	327.2	311.8	328.2	443.0	332.2	297.7	302.2	235.8	426.3	718.3	349.3
Dec	322.0	243.8	327.8	313.4	330.3	433.7	331.4	299.6	301.3	237.5	422.2	732.8	342.0

---

[1] Data have been revised through August 1987 to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

[2] Intermediate materials for food manufacturing and feeds.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–64.—*Producer price indexes by stage of processing, special groups, 1974–87*

[1967=100]

Year or month	Finished goods						Intermediate materials, supplies, and components				Crude materials for further processing			
	Total	Foods	Energy	Excluding foods and energy			Total	Foods and feeds[1]	Energy	Other	Total	Foodstuffs and feedstuffs	Energy	Other
				Total	Capital equipment	Consumer goods excluding foods and energy								
1974	147.5	166.9	215.2	133.3	141.0	129.1	162.9	200.2	188.7	156.7	196.1	189.4	223.0	198.3
1975	163.4	181.0	252.4	148.5	162.5	141.0	180.0	195.3	220.8	174.7	196.9	191.8	266.9	165.0
1976	170.6	180.4	282.3	156.8	173.4	148.1	189.1	185.3	236.8	185.0	202.7	190.2	283.1	191.0
1977	181.7	189.9	326.7	166.3	184.6	156.6	201.5	190.5	267.3	196.1	209.2	192.1	323.5	190.1
1978	195.9	207.2	347.7	178.7	199.2	168.0	215.6	203.1	280.3	210.4	234.4	216.2	362.5	209.2
1979	217.7	226.2	469.9	194.7	216.5	183.3	243.2	226.1	348.6	234.2	274.3	247.9	439.9	253.0
1980	247.0	239.5	701.3	216.4	239.8	204.2	280.3	252.6	484.9	261.8	304.6	259.2	586.1	269.4
1981	269.8	253.6	835.4	235.1	264.3	220.1	306.0	250.3	573.6	283.4	329.0	257.4	783.4	266.0
1982	280.7	259.3	822.9	248.6	279.4	232.6	310.4	239.4	570.8	290.1	319.5	247.8	801.5	238.1
1983	285.2	261.8	783.6	256.1	287.2	239.9	312.3	247.9	543.9	294.8	323.6	252.2	791.1	250.7
1984	291.1	273.3	750.3	262.3	294.0	245.9	320.0	253.1	545.0	303.6	330.8	259.5	785.2	266.1
1985	293.7	271.2	720.9	268.7	300.5	252.1	318.7	232.8	528.3	305.2	306.1	235.0	748.1	249.7
1986	289.7	278.1	518.5	274.9	306.4	258.4	307.6	230.3	414.4	304.4	280.3	231.0	575.8	245.6
1987[2]	295.7	283.9	508.2	281.6	312.1	265.6	315.2	237.3	417.2	312.8	299.2	238.3	601.2	275.2
1986: Jan	296.0	275.0	700.9	272.1	303.9	255.5	317.4	232.6	520.0	304.3	301.0	231.7	732.8	245.8
Feb	291.9	272.0	629.3	272.5	304.3	256.0	313.5	228.9	482.0	304.2	289.0	227.2	662.9	246.5
Mar	288.0	271.6	554.1	272.5	304.3	256.0	309.5	227.8	437.0	304.5	281.1	224.4	614.5	247.9
Apr	287.2	271.9	517.2	273.9	305.6	257.3	307.1	227.0	413.3	304.3	273.7	220.3	577.0	249.1
May	288.9	274.8	534.1	274.0	305.7	257.5	306.7	229.3	409.1	304.0	279.4	229.9	570.6	249.3
June	289.3	275.1	536.4	274.3	306.1	257.7	306.8	229.0	411.1	303.8	276.9	227.1	563.9	250.1
July	287.6	280.4	461.6	275.0	306.4	258.7	304.8	230.3	386.6	304.1	277.7	234.4	528.8	250.0
Aug	288.1	284.0	456.2	274.8	306.2	258.4	304.5	232.1	380.7	304.2	276.3	238.1	520.4	235.9
Sept	287.3	282.9	471.7	272.9	303.9	256.7	306.1	233.2	393.8	304.6	275.4	233.5	533.9	239.1
Oct	290.7	283.6	452.1	278.9	309.9	262.6	304.8	230.3	380.3	304.8	277.2	235.0	534.4	242.3
Nov	290.7	283.1	453.7	279.1	310.4	262.6	304.8	231.0	378.3	304.9	279.2	236.8	537.0	244.4
Dec	290.4	282.9	454.6	278.7	310.1	262.2	305.0	231.5	380.7	304.8	277.0	233.5	533.2	247.1
1987: Jan	291.8	280.1	477.4	279.8	311.2	263.4	307.0	229.5	391.3	306.2	284.2	227.6	578.0	290.3
Feb	292.3	280.8	489.6	279.3	310.7	262.9	308.9	230.0	402.6	307.2	287.2	229.9	584.4	252.8
Mar	292.6	280.3	495.5	279.5	310.5	263.3	309.3	227.6	400.3	308.1	288.6	229.6	590.1	254.4
Apr	294.9	283.2	507.4	280.7	311.8	264.4	311.0	231.9	405.3	309.3	295.3	240.1	594.1	257.4
May	295.8	286.6	506.9	280.7	311.8	264.5	313.1	240.4	412.2	310.5	302.9	251.7	597.4	263.2
June	296.2	286.7	514.3	280.7	311.4	264.6	315.2	241.1	423.2	311.7	303.7	247.0	606.3	270.2
July	297.4	287.5	522.0	281.5	311.7	265.8	316.9	241.2	432.1	312.9	306.8	243.8	623.8	275.5
Aug[2]	297.3	284.0	533.9	281.8	312.0	265.9	318.2	238.3	439.4	313.9	308.4	240.6	632.3	282.6
Sept.	296.7	286.0	521.8	281.1	311.0	265.5	318.9	241.4	432.5	315.3	305.4	238.8	615.4	291.2
Oct	298.2	284.1	514.5	284.7	314.7	269.1	320.0	240.5	424.8	317.8	304.3	237.7	604.9	300.1
Nov	298.1	284.9	513.5	284.4	314.3	268.7	321.3	242.0	425.6	319.3	302.2	235.8	598.3	301.8
Dec	296.8	282.2	501.0	284.5	314.2	269.0	322.0	243.8	416.8	321.0	301.3	237.5	589.4	302.4

---

[1] Intermediate materials for food manufacturing and feeds.

[2] Data have been revised through August 1987 to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–65.—*Producer price indexes for major commodity groups, 1947–87*

[1967=100]

Year or month	Farm products and processed foods and feeds			Industrial commodities				
	Total	Farm products	Processed foods and feeds	Total	Textile products and apparel	Hides, skins, leather, and related products	Fuels and related products, and power [1]	Chemicals and allied products [1]
1947	94.3	109.4	82.9	70.8	103.6	83.3	76.9	93.7
1948	101.5	117.5	88.7	76.9	108.1	84.2	90.5	95.9
1949	89.6	101.6	80.6	75.3	98.9	79.9	86.2	87.6
1950	93.9	106.7	83.4	78.0	102.7	86.3	87.1	88.9
1951	106.9	124.2	92.7	86.1	114.6	99.1	90.3	101.7
1952	102.7	117.2	91.6	84.1	103.4	80.1	90.1	96.5
1953	96.0	106.2	87.4	84.8	100.8	81.3	92.6	97.7
1954	95.7	104.7	88.9	85.0	98.6	77.6	91.3	98.9
1955	91.2	98.2	85.0	86.9	98.7	77.3	91.2	98.5
1956	90.6	96.9	84.9	90.8	98.7	81.9	94.0	99.1
1957	93.7	99.5	87.4	93.3	98.8	82.0	99.1	101.2
1958	98.1	103.9	91.8	93.6	97.0	82.9	95.3	102.0
1959	93.5	97.5	89.4	95.3	98.4	94.2	95.3	101.6
1960	93.7	97.2	89.5	95.3	99.5	90.8	96.1	101.8
1961	93.7	96.3	91.0	94.8	97.7	91.7	97.2	100.7
1962	94.7	98.0	91.9	94.8	98.6	92.7	96.7	99.1
1963	93.8	96.0	92.5	94.7	98.5	90.0	96.3	97.9
1964	93.2	94.6	92.3	95.2	99.2	90.3	93.7	98.3
1965	97.1	98.7	95.5	96.4	99.8	94.3	95.5	99.0
1966	103.5	105.9	101.2	98.5	100.1	103.4	97.8	99.4
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	102.4	102.5	102.2	102.5	103.7	103.2	98.9	99.8
1969	108.0	109.1	107.3	106.0	106.0	108.9	100.9	99.9
1970	111.7	111.0	112.1	110.0	107.1	110.3	106.2	102.2
1971	113.9	112.9	114.5	114.1	109.0	114.1	115.2	104.1
1972	122.4	125.0	120.8	117.9	113.6	131.3	118.6	104.2
1973	159.1	176.3	148.1	125.9	123.8	143.1	134.3	110.0
1974	177.4	187.7	170.9	153.8	139.1	145.1	208.3	146.8
1975	184.2	186.7	182.6	171.5	137.9	148.5	245.1	181.3
1976	183.1	191.0	178.0	182.4	148.2	167.8	265.6	187.2
1977	188.8	192.5	186.1	195.1	154.0	179.3	302.2	192.8
1978	206.6	212.5	202.6	209.4	159.8	200.0	322.5	198.8
1979	229.8	241.4	222.5	236.5	168.7	252.4	408.1	222.3
1980	244.7	249.4	241.2	274.8	183.5	248.9	574.0	260.3
1981	251.5	254.9	248.7	304.1	199.7	260.9	694.5	287.6
1982	248.9	242.4	251.5	312.3	204.6	262.6	693.2	292.3
1983	253.9	248.2	255.9	315.7	205.1	271.1	664.7	293.0
1984	262.4	255.8	265.0	322.6	210.0	286.3	656.8	300.8
1985	250.5	230.5	260.4	323.8	210.4	286.1	633.6	303.2
1986	251.9	225.2	265.1	312.2	211.2	296.7	483.5	299.8
1987 [2]	258.1	231.2	271.3	320.4	215.0	316.2	486.9	311.1
1986: Jan	251.5	227.4	263.3	323.8	210.7	293.7	620.3	305.1
Feb	248.3	221.8	261.4	318.9	210.9	294.1	567.0	303.7
Mar	247.3	220.2	260.7	314.0	211.4	293.6	512.1	303.8
Apr	246.2	218.6	259.9	311.6	211.1	295.0	482.4	300.2
May	250.8	227.0	262.3	311.6	211.2	296.5	483.8	298.5
June	249.8	222.6	263.2	311.8	211.1	297.9	484.7	298.4
July	254.2	228.6	266.8	308.5	211.4	297.4	444.3	298.4
Aug	255.5	227.0	269.6	307.9	211.2	297.0	438.4	297.0
Sept	254.0	224.1	269.0	308.7	211.1	296.4	452.6	297.5
Oct	254.8	227.4	268.4	309.6	211.2	297.8	438.8	298.2
Nov	255.5	230.1	267.9	309.8	211.3	299.3	438.5	298.6
Dec	254.7	227.4	268.2	309.8	211.4	301.6	439.6	298.1
1987: Jan	251.6	220.8	266.8	313.5	212.0	301.9	461.6	301.1
Feb	252.8	222.9	267.6	314.9	212.1	302.0	471.5	302.8
Mar	252.0	223.3	266.2	315.7	212.5	305.9	473.2	304.9
Apr	257.1	231.9	269.5	317.3	213.1	310.6	478.9	307.4
May	263.7	242.0	274.3	318.3	213.5	317.0	483.0	309.6
June	262.6	239.3	274.0	319.9	214.3	315.8	492.6	313.1
July	261.9	237.2	274.1	322.1	215.4	317.8	503.2	312.9
Aug [2]	258.9	231.9	272.2	323.8	215.9	318.5	511.8	313.1
Sept	260.0	232.1	273.7	323.3	216.9	321.4	501.1	314.1
Oct	258.7	229.0	273.4	324.9	217.8	326.5	492.9	317.1
Nov	258.9	232.6	271.9	325.4	218.1	326.1	491.4	318.8
Dec	258.6	231.2	272.1	325.3	218.4	330.6	481.8	318.8

---

[1] Prices for some items in this grouping are lagged and refer to 1 month earlier than the index month; the lag for refined petroleum items was eliminated beginning with the June 1985 data.

See next page for continuation of table.

TABLE B–65.—*Producer price indexes for major commodity groups, 1947–87*—Continued

[1967=100]

Year or month	Industrial commodities—Continued								
	Rubber and plastic products	Lumber and wood products	Pulp, paper, and allied products	Metals and metal products	Machinery and equipment	Furniture and household durables	Non-metallic mineral products	Transportation equipment: Motor vehicles and equipment [3]	Miscellaneous products
1947	70.5	73.4	72.5	54.9	53.7	77.0	66.3	64.1	73.5
1948	72.8	84.0	75.7	62.5	58.2	81.6	71.6	70.8	76.5
1949	70.5	77.7	72.4	63.0	61.0	82.9	73.5	75.7	78.0
1950	85.9	89.3	74.3	66.3	63.1	84.7	75.4	75.3	79.2
1951	105.4	97.2	88.0	73.8	70.5	91.8	80.1	79.4	83.9
1952	95.5	94.4	85.7	73.9	70.6	90.1	80.1	84.0	83.4
1953	89.1	94.3	85.5	76.3	72.2	91.9	83.3	83.6	85.6
1954	90.4	92.6	85.5	76.9	73.4	92.9	85.1	83.8	86.4
1955	102.4	97.1	87.8	82.1	75.7	93.3	87.5	86.3	86.5
1956	103.8	98.5	93.6	89.2	81.8	95.8	91.3	91.2	87.6
1957	103.4	93.5	95.4	91.0	87.6	98.3	94.8	95.1	90.2
1958	103.3	92.4	96.4	90.4	89.4	99.1	95.8	98.1	92.0
1959	102.9	98.8	97.3	92.3	91.3	99.3	97.0	100.3	92.2
1960	103.1	95.3	98.1	92.4	92.0	99.0	97.2	98.8	93.0
1961	99.2	91.0	95.2	91.9	91.9	98.4	97.6	98.6	93.3
1962	96.3	91.6	96.3	91.2	92.0	97.7	97.6	98.6	93.7
1963	96.8	93.5	95.6	91.3	92.2	97.0	97.1	97.8	94.5
1964	95.5	95.4	95.4	93.8	92.8	97.4	97.3	98.3	95.2
1965	95.9	95.9	96.2	96.4	93.9	96.9	97.5	98.5	95.9
1966	97.8	100.2	98.8	98.8	96.8	98.0	98.4	98.6	97.7
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	103.4	113.3	101.1	102.6	103.2	102.8	103.7	102.8	102.2
1969	105.3	125.3	104.0	108.5	106.5	104.9	107.7	104.8	105.2
1970	108.3	113.6	108.2	116.6	111.4	107.5	112.9	108.7	109.9
1971	109.1	127.3	110.1	118.7	115.5	110.0	122.4	114.9	112.9
1972	109.3	144.3	113.4	123.5	117.9	111.4	126.1	118.0	114.6
1973	112.4	177.2	122.1	132.8	121.7	115.2	130.2	119.2	119.7
1974	136.2	183.6	151.7	171.9	139.4	127.9	153.2	129.2	133.1
1975	150.2	176.9	170.4	185.6	161.4	139.7	174.0	144.6	147.7
1976	159.2	205.6	179.4	195.9	171.0	145.6	186.3	153.8	153.7
1977	167.6	236.3	186.4	209.0	181.7	151.5	200.5	163.7	164.3
1978	174.8	276.0	195.6	227.1	196.1	160.4	222.8	176.0	184.3
1979	194.3	300.4	219.0	259.3	213.9	171.3	248.6	190.5	208.7
1980	217.4	288.9	249.2	286.4	239.8	187.7	283.0	208.8	258.8
1981	232.6	292.8	273.8	300.4	263.3	198.5	309.5	237.6	265.7
1982	241.4	284.7	288.7	301.6	278.8	206.9	320.2	251.3	276.4
1983	243.2	307.1	298.1	307.2	286.4	214.0	325.2	256.8	289.6
1984	246.8	307.4	318.5	316.1	293.1	218.7	337.3	261.5	295.9
1985	245.9	303.6	327.2	314.9	298.9	221.6	347.8	267.3	302.3
1986	245.9	305.3	335.3	311.2	303.3	224.0	352.1	274.2	308.6
1987 [2]	248.5	320.9	351.8	323.0	307.8	227.5	352.3	280.9	317.2
1986: Jan	246.9	298.9	330.6	311.0	301.1	222.7	352.5	270.3	307.3
Feb	247.5	297.1	331.1	311.2	301.6	223.0	352.3	270.8	306.9
Mar	246.7	301.2	331.3	311.2	302.0	223.2	352.4	270.2	307.2
Apr	246.7	308.6	332.8	311.0	302.7	223.6	352.8	272.9	307.3
May	246.3	308.1	333.8	310.6	302.9	224.1	353.6	272.6	307.2
June	246.1	306.0	334.2	310.7	303.1	224.2	353.0	273.0	306.8
July	245.4	306.8	335.2	310.4	303.9	224.1	352.9	273.3	309.4
Aug	246.2	307.2	336.4	311.1	304.1	224.2	351.8	272.0	309.7
Sept	245.7	308.8	337.8	311.7	304.2	224.2	351.4	264.2	310.0
Oct	245.1	307.1	339.4	311.9	304.5	224.6	351.3	284.3	310.4
Nov	244.4	307.5	340.4	312.0	304.9	224.9	351.1	283.9	310.7
Dec	244.2	306.8	340.9	311.7	305.2	224.9	350.0	282.7	310.2
1987: Jan	245.0	307.9	345.0	312.8	306.1	225.5	350.0	283.0	312.6
Feb	245.2	311.6	347.4	313.2	306.5	225.7	350.8	278.7	312.7
Mar	244.8	314.8	348.1	313.8	306.7	226.1	351.2	279.2	313.2
Apr	245.6	315.2	349.2	315.0	306.7	226.8	351.9	282.2	314.8
May	246.1	315.2	349.2	317.4	307.1	227.2	351.8	280.8	315.1
June	246.9	317.2	350.0	319.0	306.9	227.4	352.4	280.0	315.3
July	248.3	320.0	351.2	322.0	307.7	227.7	352.5	279.8	318.3
Aug [2]	249.2	323.8	352.9	324.7	308.2	228.2	352.0	278.3	319.2
Sept	250.0	331.1	354.9	327.7	308.4	228.1	352.5	274.0	319.8
Oct	252.1	330.2	356.9	333.3	309.0	228.8	354.2	287.9	320.1
Nov	254.0	331.8	357.6	336.0	309.5	229.1	354.2	285.1	321.0
Dec	255.1	332.3	358.9	340.6	310.4	229.7	354.2	281.3	324.0

---

[2] Data have been revised through August 1987 to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

[3] Index for total transportation equipment is not shown but is available beginning December 1968.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–66.—*Changes in producer price indexes for finished goods, 1955–87*

[Percent change]

Year or month	Total finished goods		Finished consumer foods		Finished goods excluding consumer foods						Finished energy goods		Finished goods excluding foods and energy	
					Total		Consumer goods		Capital equipment					
	Dec. to Dec. [1]	Year to year	Dec. to Dec. [1]	Year to year	Dec. to Dec. [1]	Year to year	Dec. to Dec. [1]	Year to year	Dec. to Dec. [1]	Year to year	Dec. to Dec. [1]	Year to year	Dec. to Dec. [1]	Year to year
1955	1.2	0.2	−2.9	−2.5	....	....	1.7	0.8	5.6	3.0	....	....	....	....
1956	4.2	2.8	3.6	−.2	....	....	2.5	2.4	8.3	7.4	....	....	....	....
1957	3.2	3.6	5.3	3.5	....	....	1.7	2.5	4.3	6.2	....	....	....	....
1958	.5	2.3	.4	5.8	....	....	.2	.1	1.3	2.6	....	....	....	....
1959	−.4	−.2	−3.7	−4.7	....	....	.8	1.3	1.0	1.9	....	....	....	....
1960	1.8	.8	5.2	2.2	....	....	.4	.4	.1	.2	....	....	....	....
1961	−.5	0	−1.8	−.4	....	....	−.3	−.1	.2	.1	....	....	....	....
1962	.1	.3	.5	.9	....	....	−.1	−.2	.3	.4	....	....	....	....
1963	−.2	−.3	−1.3	−1.2	....	....	.1	0	.5	.2	....	....	....	....
1964	.5	.4	.4	.5	....	....	.1	−.1	.9	1.0	....	....	....	....
1965	3.3	1.7	9.1	3.8	....	....	.9	.7	1.5	1.2	....	....	....	....
1966	2.2	3.2	1.4	6.5	....	....	1.7	1.6	3.9	2.5	....	....	....	....
1967	1.6	1.2	−.4	−1.6	....	....	2.1	1.9	3.1	3.3	....	....	....	....
1968	3.1	2.8	4.8	3.6	2.4	2.6	2.0	2.1	3.0	3.5	....	....	....	....
1969	4.8	3.7	8.2	6.2	3.4	2.7	2.9	2.4	4.6	3.3	....	....	....	....
1970	2.2	3.5	−2.5	3.2	4.3	3.5	3.9	3.0	4.9	4.8	....	....	....	....
1971	3.2	3.1	5.9	1.6	2.1	3.7	2.0	3.4	2.4	4.1	....	....	....	....
1972	3.8	3.1	8.0	5.6	2.1	2.0	2.0	1.9	2.0	2.5	....	....	....	....
1973	11.8	9.1	22.5	20.3	6.6	4.1	7.4	4.5	5.3	3.3	....	....	....	....
1974	18.3	15.3	13.0	14.0	21.2	16.0	20.5	16.9	22.6	14.2	....	....	....	....
1975	6.6	10.8	5.5	8.4	7.2	12.1	6.7	10.5	8.2	15.2	16.4	17.3	6.1	11.4
1976	3.7	4.4	−2.5	−.3	6.2	6.3	6.0	6.2	6.4	6.7	11.5	11.8	5.6	5.6
1977	6.9	6.5	6.9	5.3	6.9	7.0	6.7	7.2	7.3	6.5	12.1	15.7	6.3	6.1
1978	9.2	7.8	11.7	9.1	8.3	7.3	8.5	7.1	7.9	7.9	8.5	6.4	8.3	7.5
1979	12.8	11.1	7.4	9.2	14.8	11.9	17.5	13.3	8.8	8.7	58.0	35.1	9.4	9.0
1980	11.8	13.5	7.5	5.9	13.3	16.2	14.2	18.6	11.4	10.8	27.8	49.2	10.7	11.1
1981	7.1	9.2	1.4	5.9	8.8	10.3	8.5	10.2	9.2	10.2	14.1	19.1	7.8	8.6
1982	3.7	4.0	2.1	2.2	4.1	4.6	4.2	4.1	3.9	5.7	−.1	−1.5	4.9	5.7
1983	.6	1.6	2.3	1.0	.0	1.7	−.8	1.3	1.9	2.8	−9.2	−4.8	1.8	3.0
1984	1.7	2.1	3.5	4.4	1.1	1.4	.8	.9	1.8	2.4	−4.1	−4.2	2.1	2.4
1985	1.8	.9	.5	−.8	2.2	1.4	2.0	1.1	2.7	2.2	−.3	−3.9	2.7	2.4
1986	−2.3	−1.4	2.9	2.5	−4.0	−2.6	−6.6	−4.6	2.1	2.0	−38.0	−28.1	2.7	2.3
1987 [2]	2.2	2.1	−.2	2.1	3.0	2.1	3.9	2.2	1.3	1.9	10.2	−2.0	2.1	2.4
	Percent change from preceding month													
	Unadjusted	Seasonally adjusted	Unadjusted	Seasonally adjusted	Unadjusted	Seasonally adjusted	Unadjusted	Seasonally adjusted	Unadjusted	Seasonally adjusted	Unadjusted	Seasonally adjusted	Unadjusted	Seasonally adjusted
1986: Jan	−0.4	−0.4	0.0	−0.8	−0.6	−0.2	−0.8	−0.3	0.1	0.0	−4.5	−1.8	0.3	0.1
Feb	−1.4	−1.5	−1.1	−1.4	−1.5	−1.5	−2.2	−2.2	.1	.1	−10.2	−10.3	.1	.1
Mar	−1.3	−.9	−.1	.2	−1.7	−1.2	−2.5	−1.9	0	.2	−11.9	−11.4	0	.5
Apr	−.3	−.5	.1	.4	−.4	−.8	−.8	−1.4	.4	.3	−6.7	−8.1	.5	.3
May	.6	.5	1.1	1.4	.4	.2	.6	.2	.0	.1	3.3	2.2	.0	−.1
June	.1	.2	.1	.1	.1	.2	.1	.2	.1	.2	.4	.5	.1	.2
July	−.6	−.8	1.9	1.3	−1.4	−1.5	−2.1	−2.2	.1	.1	−13.9	−13.9	.3	.2
Aug	.2	.4	1.3	1.4	−.2	.0	−.3	0	−.1	.1	−1.2	−.8	−.1	.1
Sept	−.3	.3	−.4	−.1	−.2	.4	−.0	.4	−.8	.3	3.4	1.8	−.7	.2
Oct	1.2	.3	.2	.9	1.5	.1	1.3	.0	2.0	.4	−4.2	−3.7	2.2	.6
Nov	0	.0	−.2	−.2	.1	.2	.1	.1	.2	.4	.4	−.2	.1	.2
Dec	−.1	.1	−.1	−.5	−.1	.2	−.1	.3	−.1	.1	.2	.7	−.1	.2
1987: Jan	.5	.4	−1.0	−1.8	1.0	1.2	1.3	1.7	.4	.2	5.0	7.7	.4	.4
Feb	.2	.1	.2	−.1	.1	.1	.3	.3	−.2	−.2	2.6	2.5	−.2	−.3
Mar	.1	.5	−.2	.1	.2	.7	.4	1.0	−.1	.1	1.2	1.8	.1	.6
Apr	.8	.5	1.0	1.4	.7	.2	.8	.2	.4	.3	2.4	.9	.4	.1
May	.3	.2	1.2	1.4	0	−.2	0	−.4	0	.1	−.1	−1.1	0	−.1
June	.1	.2	.0	.1	.1	.2	.3	.4	−.1	−.1	1.5	1.5	0	.0
July	.4	.2	.3	−.3	.5	.4	.7	.6	.1	.1	1.5	1.7	.3	.2
Aug [2]	−.0	.2	−1.2	−1.1	.4	.6	.5	.8	.1	.3	2.3	2.6	.1	.4
Sept	−.2	.3	.7	1.0	−.5	.0	−.6	−.3	−.3	.7	−2.3	−3.6	−.2	.6
Oct	.5	−.2	−.7	−.1	.9	−.3	.8	−.2	1.2	−.4	−1.4	−1.0	1.3	−.2
Nov	−.0	0	.3	.3	−.1	−.1	−.2	−.2	−.1	.1	−.2	−.8	−.1	0
Dec	−.4	−.3	−.9	−1.3	−.3	.1	−.4	0	−.0	.2	−2.4	−1.9	.0	.4

[1] Changes from December to December are based on unadjusted indexes.

[2] Data have been revised through August 1987 to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B–67.—*Money stock, liquid assets, and debt measures, 1959–87*

[Averages of daily figures; billions of dollars, seasonally adjusted]

Year and month	M1	M2	M3	L	Debt[1]	Percent change from year or 6 months earlier[2]			
	Sum of currency, demand deposits, travelers checks, and other checkable deposits (OCDs)	M1 plus overnight RPs and Eurodollars, MMMF balances (general purpose and broker/dealer), MMDAs, and savings and small time deposits	M2 plus large time deposits, term RPs, term Eurodollars, and institution-only MMMF balances	M3 plus other liquid assets	Debt of domestic nonfinancial sectors (monthly average)	M1	M2	M3	Debt
December:									
1959	141.0	297.8	299.8	388.6	659.5	......	......	......	8.2
1960	141.8	312.3	315.3	403.6	694.7	0.6	4.9	5.2	5.3
1961	146.5	335.5	341.0	430.8	737.0	3.3	7.4	8.2	6.1
1962	149.2	362.7	371.4	466.1	789.4	1.8	8.1	8.9	7.1
1963	154.7	393.2	406.0	503.8	845.1	3.7	8.4	9.3	7.1
1964	161.9	424.8	442.5	540.4	908.3	4.7	8.0	9.0	7.5
1965	169.5	459.4	482.2	584.4	977.0	4.7	8.1	9.0	7.6
1966	173.7	480.0	505.1	614.8	1,044.4	2.5	4.5	4.7	6.9
1967	185.1	524.3	557.1	666.5	1,120.9	6.6	9.2	10.3	7.3
1968	199.4	566.3	606.2	728.9	1,216.1	7.7	8.0	8.8	8.5
1969	205.8	589.5	615.0	763.5	1,305.9	3.2	4.1	1.5	7.4
1970	216.6	628.2	677.5	816.3	1,396.2	5.2	6.6	10.2	6.9
1971	230.8	712.7	776.2	903.1	1,529.8	6.6	13.5	14.6	9.6
1972	252.0	805.1	886.0	1,023.0	1,686.2	9.2	13.0	14.1	10.2
1973	265.9	861.0	985.0	1,142.7	1,874.5	5.5	6.9	11.2	11.2
1974	277.5	908.5	1,070.4	1,250.4	2,048.1	4.4	5.5	8.7	9.3
1975	291.1	1,023.2	1,172.2	1,367.1	2,231.5	4.9	12.6	9.5	9.0
1976	310.4	1,163.7	1,311.9	1,516.7	2,471.7	6.6	13.7	11.9	10.8
1977	335.3	1,286.8	1,472.9	1,705.5	2,785.9	8.0	10.6	12.3	12.7
1978	363.0	1,389.2	1,647.1	1,911.2	3,158.6	8.3	8.0	11.8	13.4
1979	391.1	1,500.3	1,806.7	2,119.6	3,541.6	7.7	8.0	9.7	12.1
1980	416.6	1,633.1	1,990.9	2,327.6	3,880.9	6.5	8.9	10.2	9.6
1981	443.2	1,795.5	2,236.4	2,598.9	4,262.1	6.4	9.9	12.3	9.8
1982	481.3	1,953.8	2,443.1	2,853.0	4,645.5	8.6	8.8	9.2	9.0
1983	526.9	2,184.6	2,692.8	3,154.6	5,181.7	9.5	11.8	10.2	11.5
1984	557.5	2,369.1	2,985.4	3,528.1	5,932.6	5.8	8.4	10.9	14.5
1985	627.0	2,569.5	3,205.0	3,837.1	6,749.4	12.5	8.5	7.4	13.8
1986	730.5	2,801.2	3,493.1	4,140.7	7,606.1	16.5	9.0	9.0	12.7
1987 ᵖ	753.2	2,894.8	3,661.8	4,330.3	8,299.0	3.1	3.3	4.8	9.1
1987: Jan	737.7	2,823.5	3,519.1	4,173.3	7,673.6	18.9	9.9	9.2	13.8
Feb	737.4	2,823.0	3,522.7	4,180.8	7,710.9	15.2	7.8	7.6	12.2
Mar	739.5	2,826.5	3,527.4	4,169.8	7,754.3	13.8	6.7	6.2	10.8
Apr	750.3	2,839.9	3,544.0	4,181.8	7,815.6	14.4	5.8	5.9	10.7
May	753.1	2,840.3	3,560.3	4,215.8	7,882.8	11.8	4.7	5.7	10.1
June	746.6	2,841.6	3,577.5	4,230.7	7,943.2	4.5	2.9	4.9	9.1
July	747.6	2,847.9	3,584.2	4,226.1	7,985.9	2.7	1.7	3.7	8.3
Aug	751.0	2,862.7	3,604.8	4,252.1	8,037.5	3.7	2.8	4.7	8.7
Sept	751.2	2,875.6	3,621.1	4,280.7	8,098.0	3.2	3.5	5.4	9.1
Oct	760.8	2,892.2	3,644.4	4,316.3	8,166.2	2.8	3.7	5.7	9.2
Nov ᵖ	756.7	2,890.9	3,657.7	4,330.7	8,243.4	1.0	3.6	5.5	9.4
Dec ᵖ	753.2	2,894.8	3,661.8	4,330.3	8,299.0	1.8	3.8	4.8	9.2

---

[1] Consists of outstanding credit market debt of the U.S. Government, State and local government, and private nonfinancial sectors; data from flow of funds accounts.

[2] Annual changes are from December to December; monthly changes are from 6 months earlier at an annual rate.

Note.—The nontransactions portion of M2 is seasonally adjusted as a whole to reduce distortions caused by substantial portfolio shifts arising from regulatory and financial changes in recent years, especially shifts to MMDAs in 1983. A similar procedure is used to seasonally adjust the remaining nontransactions balances in M3. See Table B–68 for components.

Source: Board of Governors of the Federal Reserve System.

TABLE B-68.—*Components of money stock measures and liquid assets, 1959–87*

[Averages of daily figures; billions of dollars, seasonally adjusted, except as noted]

Year and month	Currency	Travelers checks	Demand deposits	Other checkable deposits (OCDs)	Overnight repurchase agreements (RPs) net, plus overnight Eurodollars NSA	Money market mutual fund (MMMF) balances		Money market deposit accounts (MMDAs) NSA	Savings deposits
						General purpose and broker/dealer NSA	Institution only NSA		
December:									
1959	29.0	0.4	111.6	0.0	0.0	0.0	0.0	0.0	146.4
1960	28.9	.4	112.5	.0	.0	.0	.0	.0	159.1
1961	29.5	.4	116.5	.0	.0	.0	.0	.0	175.5
1962	30.6	.4	118.2	.0	.0	.0	.0	.0	194.8
1963	32.5	.5	121.7	.1	.0	.0	.0	.0	214.4
1964	34.3	.5	127.0	.1	.0	.0	.0	.0	235.2
1965	36.3	.6	132.5	.1	.0	.0	.0	.0	256.9
1966	38.3	.6	134.6	.1	.0	.0	.0	.0	253.1
1967	40.4	.7	143.9	.1	.0	.0	.0	.0	263.7
1968	43.4	.8	155.1	.1	.0	.0	.0	.0	268.9
1969	46.1	.8	158.8	.1	2.2	.0	.0	.0	263.7
1970	49.2	1.0	166.3	.1	1.3	.0	.0	.0	261.0
1971	52.6	1.1	176.9	.2	2.3	.0	.0	.0	292.2
1972	56.8	1.3	193.7	.2	2.8	.0	.0	.0	321.4
1973	61.6	1.5	202.4	.3	5.3	.1	.0	.0	326.7
1974	67.9	1.8	207.4	.4	5.6	1.7	.2	.0	338.4
1975	73.8	2.3	214.1	.9	5.8	2.7	.4	.0	388.7
1976	80.6	2.8	224.3	2.7	10.6	2.4	.6	.0	453.1
1977	88.6	3.1	239.4	4.2	14.7	2.4	.9	.0	492.0
1978	97.6	3.5	253.4	8.5	20.3	6.4	3.1	.0	481.7
1979	106.4	3.8	261.1	19.8	21.2	33.4	9.5	.0	423.5
1980	116.7	4.2	265.2	30.5	28.3	61.6	15.2	.0	400.8
1981	124.1	4.4	234.6	80.2	35.9	150.6	38.0	.0	344.3
1982	134.3	4.3	237.9	104.7	38.8	185.2	51.1	43.2	357.3
1983	148.3	4.9	242.3	131.4	53.8	138.2	43.2	379.0	306.2
1984	158.5	5.2	248.3	145.5	56.3	167.5	62.7	417.4	288.8
1985	170.6	5.9	272.2	178.3	70.2	176.5	65.1	513.2	303.6
1986	183.5	6.4	308.3	232.3	78.4	207.6	84.1	571.4	366.3
1987 ^{p}	199.7	7.0	291.7	254.7	77.6	221.2	88.6	523.7	410.6
1986: Jan	171.8	5.9	270.3	180.9	68.8	177.7	67.3	516.6	304.0
Feb	172.7	6.0	270.3	183.1	68.4	181.0	67.7	517.1	304.8
Mar	173.8	6.1	274.6	186.0	67.3	186.2	70.2	521.0	306.6
Apr	174.4	6.1	277.7	189.9	68.2	191.4	74.1	526.1	311.1
May	175.8	6.1	282.2	195.5	68.9	193.2	76.1	531.6	316.8
June	176.7	6.2	285.0	199.6	66.3	197.3	75.0	541.0	321.8
July	177.6	6.3	288.2	204.5	72.0	199.7	77.5	546.6	327.4
Aug	179.0	6.4	291.2	210.4	75.0	200.5	80.8	553.6	334.6
Sept	179.7	6.4	292.2	214.7	73.1	202.2	84.4	558.8	341.4
Oct	181.2	6.4	293.4	220.3	78.2	206.9	84.5	564.4	350.5
Nov	182.4	6.4	297.8	225.8	77.5	207.1	84.4	568.7	358.5
Dec	183.5	6.4	308.3	232.3	78.4	207.6	84.1	571.4	366.3
1987: Jan	186.0	6.5	305.1	240.1	84.7	209.0	84.0	574.3	376.7
Feb	187.2	6.7	300.8	242.9	80.1	210.7	84.7	570.8	387.2
Mar	187.7	6.8	299.3	245.7	76.9	211.6	84.9	570.6	396.3
Apr	188.9	6.8	303.9	250.7	76.9	211.0	83.1	565.5	406.1
May	190.2	6.7	303.9	252.2	76.0	208.9	81.8	557.1	411.7
June	191.1	6.8	297.4	251.2	74.5	209.6	81.3	553.5	415.2
July	192.1	6.8	296.2	252.6	75.1	209.6	83.4	548.1	416.7
Aug	193.2	6.9	296.4	254.6	79.2	212.2	83.4	543.7	419.9
Sept	194.5	7.0	294.1	255.6	82.8	215.4	80.7	539.2	419.3
Oct	196.2	7.0	300.5	257.1	85.4	217.9	81.6	532.6	416.8
Nov ^{p}	198.4	7.0	295.8	255.5	79.0	219.9	88.5	526.3	412.0
Dec ^{p}	199.7	7.0	291.7	254.7	77.6	221.2	88.6	523.7	410.6

See next page for continuation of table.

TABLE B–68.—*Components of money stock measures and liquid assets, 1959–87*—Continued

[Averages of daily figures; billions of dollars, seasonally adjusted, except as noted]

Year and month	Small denomination time deposits [1]	Large denomination time deposits [1]	Term repurchase agreements (RPs) NSA	Term Eurodollars NSA	Savings bonds	Short-term Treasury securities	Bankers acceptances	Commercial paper
December:								
1959	11.4	1.2	0.0	0.7	46.1	38.6	0.6	3.6
1960	12.5	2.0	.0	.8	45.7	36.7	.9	5.1
1961	14.8	3.9	.0	1.4	46.5	37.0	1.1	5.2
1962	20.1	7.0	.0	1.6	46.9	39.8	1.1	6.8
1963	25.5	10.8	.0	1.9	48.1	40.7	1.2	7.7
1964	29.2	15.2	.0	2.4	49.0	38.5	1.3	9.1
1965	34.5	21.2	.0	1.7	49.6	40.7	1.6	10.2
1966	55.0	23.1	.0	2.1	50.2	43.2	1.8	14.4
1967	77.8	30.9	.0	2.1	51.2	38.7	1.8	17.8
1968	100.5	37.4	.0	2.9	51.8	46.1	2.3	22.5
1969	120.4	20.4	2.6	2.7	51.7	59.5	3.3	34.0
1970	151.1	45.2	1.6	2.2	52.0	48.9	3.5	34.5
1971	189.7	57.7	2.7	2.7	54.3	36.1	3.8	32.7
1972	231.6	73.3	3.5	3.6	57.6	40.7	3.5	35.2
1973	265.8	111.1	6.8	5.4	60.4	49.3	5.0	43.0
1974	287.9	144.8	7.9	8.0	63.3	52.8	12.6	51.4
1975	337.9	129.7	8.2	9.7	67.2	68.4	10.7	48.5
1976	390.7	118.1	14.0	14.8	71.8	69.8	10.8	52.5
1977	445.5	145.2	19.1	20.2	76.4	78.1	14.1	64.1
1978	521.0	195.5	26.6	31.8	80.3	81.1	22.0	80.7
1979	634.4	222.8	29.5	44.7	79.6	107.8	27.2	98.4
1980	728.7	259.8	34.0	50.3	72.3	133.4	32.1	98.9
1981	823.3	302.1	36.0	67.5	67.8	149.4	40.0	105.3
1982	851.0	326.2	34.5	81.7	68.0	183.7	44.5	113.6
1983	783.8	326.2	51.8	91.5	71.1	212.6	45.1	133.0
1984	885.3	417.0	61.9	82.9	74.2	263.5	45.7	160.3
1985	884.2	436.1	65.7	76.6	79.4	304.6	42.4	206.6
1986	853.5	447.1	84.0	83.8	91.7	288.1	37.5	230.2
1987 ^{p}	913.4	488.5	106.7	92.7	100.4	271.3	44.6	252.2
1986: Jan	888.1	445.0	68.5	75.9	79.9	302.9	42.4	209.5
Feb	889.8	447.6	70.2	79.1	80.5	306.0	42.5	208.6
Mar	892.0	448.5	71.1	82.7	81.2	299.4	41.4	208.8
Apr	893.1	451.3	70.9	81.4	81.9	298.5	40.6	206.1
May	888.0	447.6	73.2	79.5	82.7	304.0	39.8	210.7
June	883.0	447.5	73.9	79.7	83.5	298.3	39.8	212.6
July	880.9	448.3	73.4	78.3	84.3	292.6	39.0	214.5
Aug	876.7	449.4	74.9	78.0	85.3	286.2	37.3	219.7
Sept	872.2	448.4	78.1	81.4	86.4	285.7	36.9	223.9
Oct	864.7	445.5	78.8	78.0	87.7	284.2	37.7	228.4
Nov	857.1	445.8	83.8	80.2	89.8	288.8	38.0	228.4
Dec	853.5	447.1	84.0	83.8	91.7	288.1	37.5	230.2
1987: Jan	851.6	449.7	83.6	85.4	92.7	284.1	37.8	239.7
Feb	848.5	448.2	87.2	88.0	93.5	285.6	39.3	239.8
Mar	846.1	450.1	87.2	88.4	94.3	269.2	39.8	239.1
Apr	843.9	454.6	94.5	83.8	95.1	256.5	41.2	244.9
May	843.2	459.7	102.8	87.0	95.9	262.9	42.4	254.3
June	850.1	465.1	107.8	89.7	96.5	261.1	43.5	252.1
July	858.5	465.1	107.5	85.7	97.3	252.9	43.4	248.4
Aug	865.5	466.8	108.0	90.5	97.8	256.3	42.9	250.2
Sept	871.5	468.9	109.7	94.8	98.2	260.1	43.8	257.5
Oct	882.5	475.9	106.9	93.7	98.7	272.3	44.5	256.4
Nov ^{p}	909.9	485.0	109.7	93.1	99.5	277.8	45.1	250.6
Dec ^{p}	913.4	488.5	106.7	92.7	100.4	271.3	44.6	252.2

---

[1] Small denomination and large denomination deposits are those issued in amounts of less than $100,000 and more than $100,000, respectively.

Note.—NSA indicates data are not seasonally adjusted.
See also Table B–67.

Source: Board of Governors of the Federal Reserve System.

TABLE B–69.—*Aggregate reserves of depository institutions and monetary base, 1959–87*

[Averages of daily figures; millions of dollars; seasonally adjusted, except as noted]

Year and month	Adjusted for changes in reserve requirements [1]					Borrowings of depository institutions from the Federal Reserve, NSA		
	Reserves of depository institutions				Monetary base			
	Total	Nonborrowed	Nonborrowed plus extended credit	Required		Total	Seasonal	Extended credit
December:								
1959	13,552	12,611	12,611	13,046	43,277	941	......	......
1960	13,722	13,648	13,648	12,979	43,248	74	......	......
1961	14,148	14,015	14,015	13,564	44,271	133	......	......
1962	14,412	14,151	14,151	13,840	45,516	260	......	......
1963	14,711	14,378	14,378	14,220	47,765	332	......	......
1964	15,187	14,923	14,923	14,781	50,111	264	......	......
1965	15,732	15,288	15,288	15,308	52,784	444	......	......
1966	15,727	15,195	15,195	15,388	54,858	532	......	......
1967	17,123	16,895	16,895	16,748	58,265	228	......	......
1968	18,015	17,270	17,270	17,589	62,340	746	......	......
1969	18,292	17,173	17,173	18,005	65,469	1,119	......	......
1970	19,180	18,848	18,848	18,932	69,477	332	......	......
1971	20,415	20,289	20,289	20,233	74,165	126	......	......
1972	22,474	21,424	21,424	22,190	80,693	1,050	......	......
1973	23,481	22,183	22,183	23,178	87,204	1,298	41	......
1974	24,713	23,985	24,132	24,454	94,393	727	32	147
1975	24,846	24,716	24,728	24,580	100,523	130	14	12
1976	25,386	25,333	25,333	25,112	108,082	53	13	......
1977	26,411	25,842	25,842	26,221	117,185	569	55	......
1978	27,686	26,818	26,818	27,453	127,754	868	135	......
1979	28,971	27,498	27,499	28,529	138,709	1,473	81	......
1980	30,808	29,118	29,121	30,294	150,021	1,690	116	3
1981	32,077	31,440	31,589	31,757	157,918	636	54	148
1982	34,320	33,686	33,872	33,820	169,964	634	33	186
1983	36,107	35,333	35,335	35,546	185,235	774	96	2
1984	39,909	36,723	39,327	39,057	199,596	3,186	113	2,604
1985	46,056	44,738	45,237	44,999	217,323	1,318	56	499
1986	56,166	55,340	55,643	54,798	239,513	827	38	303
1987 ^{p}	57,436	56,658	57,142	56,407	256,702	777	93	483
1986: Jan	46,116	45,345	45,843	45,005	218,540	770	36	497
Feb	46,715	45,832	46,324	45,618	220,003	884	56	492
Mar	47,379	46,619	47,137	46,483	221,846	761	68	518
Apr	48,039	47,146	47,780	47,238	223,104	893	73	634
May	49,016	48,140	48,725	48,178	225,332	876	94	584
June	49,726	48,923	49,454	48,795	226,933	803	108	531
July	50,690	49,950	50,328	49,780	228,605	741	116	378
Aug	51,501	50,628	51,094	50,761	230,826	872	144	465
Sept	52,302	51,294	51,864	51,576	232,281	1,008	137	570
Oct	53,225	52,384	52,881	52,479	234,426	841	99	497
Nov	54,489	53,737	54,155	53,511	236,875	752	70	418
Dec	56,166	55,340	55,643	54,798	239,513	827	38	303
1987: Jan	56,884	56,304	56,529	55,816	242,431	580	34	225
Feb	56,873	56,317	56,600	55,662	243,970	556	71	283
Mar	56,852	56,325	56,589	55,936	244,563	527	91	264
Apr	57,954	56,961	57,231	57,127	246,586	993	120	270
May	58,352	57,317	57,604	57,273	248,372	1,035	196	288
June	57,706	56,930	57,203	56,516	248,481	776	259	273
July	57,602	56,929	57,124	56,841	249,457	672	283	194
Aug	57,876	57,229	57,360	56,844	250,798	647	279	132
Sept	57,825	56,885	57,294	57,032	251,852	940	231	409
Oct	58,496	57,553	58,003	57,368	254,352	943	189	449
Nov ^{p}	57,987	57,362	57,756	57,064	256,079	625	126	394
Dec ^{p}	57,436	56,658	57,142	56,407	256,702	777	93	483

---

[1] Aggregate reserves incorporate adjustments for discontinuities associated with the implementation of the Monetary Control Act and other regulatory changes to reserve requirements. For details on aggregate reserves series see Federal Reserve *Bulletin*.

Note.—NSA indicates data are not seasonally adjusted.

Source: Board of Governors of the Federal Reserve System.

TABLE B-70.—*Commercial bank loans and securities, 1972–87*

[Monthly average, billions of dollars, seasonally adjusted [1]]

Year and month	Total loans and securities	Loans and leases		U.S. Government securities	Other securities
		Total	Commercial and industrial loans		
December:					
1972	572.5	390.1	137.1	89.0	93.4
1973	647.9	460.3	165.0	88.2	99.4
1974	713.9	520.0	196.6	86.3	107.5
1975	745.3	517.3	189.3	116.7	111.2
1976	804.9	555.1	190.9	136.3	113.5
1977	891.9	632.6	211.0	136.6	122.7
1978	1,014.3	747.5	246.2	137.6	129.3
1979	1,136.1	849.8	291.4	144.3	141.9
1980	1,239.0	913.9	325.7	170.6	154.5
1981	1,307.2	967.2	355.2	179.3	160.7
1982	1,401.0	1,033.8	392.4	201.8	165.4
1983	1,553.0	1,123.5	414.1	259.4	170.2
1984	1,722.6	1,319.9	473.1	260.6	142.1
1985	1,908.0	1,456.0	499.9	271.4	180.6
1986	2,089.8	1,583.0	541.4	309.9	196.9
1987 ᵖ	2,222.4	1,691.9	570.9	334.0	196.4
1986: Jan	1,937.5	1,475.9	503.0	269.1	192.5
Feb	1,944.1	1,481.1	505.1	272.3	190.7
Mar	1,955.7	1,498.1	507.5	270.2	187.5
Apr	1,960.5	1,502.2	510.0	272.0	186.3
May	1,969.8	1,508.5	509.9	275.7	185.6
June	1,978.3	1,515.6	512.9	275.7	187.0
July	1,998.2	1,523.7	512.6	284.7	189.7
Aug	2,022.6	1,535.1	515.2	291.5	196.0
Sept	2,044.6	1,545.4	517.3	294.9	204.2
Oct	2,052.3	1,553.0	520.0	299.6	199.8
Nov	2,063.5	1,561.5	525.7	304.1	197.9
Dec	2,089.8	1,583.0	541.4	309.9	196.9
1987: Jan	2,118.3	1,611.8	554.1	316.3	190.2
Feb	2,119.7	1,610.7	553.8	315.2	193.9
Mar	2,126.2	1,616.4	551.7	314.3	195.5
Apr	2,147.3	1,634.3	553.9	315.8	197.2
May	2,160.6	1,642.9	555.9	320.1	197.6
June	2,167.1	1,651.7	558.0	316.9	198.5
July	2,169.5	1,652.8	555.5	319.8	196.9
Aug	2,189.0	1,665.5	555.6	328.6	194.9
Sept	2,206.7	1,680.4	560.5	331.7	194.6
Oct	2,225.5	1,699.0	565.7	332.2	194.3
Nov	2,223.5	1,696.0	567.0	331.0	196.4
Dec ᵖ	2,222.4	1,691.9	570.9	334.0	196.4

---

[1] Data are prorated averages of Wednesday figures for domestically chartered banks and averages of weekly data for foreign-related institutions beginning July 1981. Prior to July 1981, data for foreign-related institutions are averages of current and previous month-end data. Lease financing receivables are included in total loans and investments and in total loans.

Note.—Data are not strictly comparable because of breaks in the series.

Source: Board of Governors of the Federal Reserve System.

TABLE B–71.—*Bond yields and interest rates, 1929–87*

[Percent per annum]

Year and month	U.S. Treasury securities				Corporate bonds (Moody's)		High-grade municipal bonds (Standard & Poor's)	New-home mortgage yields (FHLBB)[4]	Commercial paper, 6 months[5]	Prime rate charged by banks[6]	Discount rate, Federal Reserve Bank of New York[6]	Federal funds rate[7]
	Bills (new issues)[1]		Constant maturities[2]									
	3-month	6-month	3-year	10-year	Aaa[3]	Baa						
1929	....	....	....	....	4.73	5.90	4.27	....	5.85	5.50–6.00	5.16	....
1933	0.515	....	....	....	4.49	7.76	4.71	....	1.73	1.50–4.00	2.56	....
1939	.023	....	....	....	3.01	4.96	2.76	....	.59	1.50	1.00	....
1940	.014	....	....	....	2.84	4.75	2.50	....	.56	1.50	1.00	....
1941	.103	....	....	....	2.77	4.33	2.10	....	.53	1.50	1.00	....
1942	.326	....	....	....	2.83	4.28	2.36	....	.66	1.50	[8]1.00	....
1943	.373	....	....	....	2.73	3.91	2.06	....	.69	1.50	[8]1.00	....
1944	.375	....	....	....	2.72	3.61	1.86	....	.73	1.50	[8]1.00	....
1945	.375	....	....	....	2.62	3.29	1.67	....	.75	1.50	[8]1.00	....
1946	.375	....	....	....	2.53	3.05	1.64	....	.81	1.50	[8]1.00	....
1947	.594	....	....	....	2.61	3.24	2.01	....	1.03	1.50–1.75	1.00	....
1948	1.040	....	....	....	2.82	3.47	2.40	....	1.44	1.75–2.00	1.34	....
1949	1.102	....	....	....	2.66	3.42	2.21	....	1.49	2.00	1.50	....
1950	1.218	....	....	....	2.62	3.24	1.98	....	1.45	2.07	1.59	....
1951	1.552	....	....	....	2.86	3.41	2.00	....	2.16	2.56	1.75	....
1952	1.766	....	....	....	2.96	3.52	2.19	....	2.33	3.00	1.75	....
1953	1.931	....	2.47	2.85	3.20	3.74	2.72	....	2.52	3.17	1.99	....
1954	.953	....	1.63	2.40	2.90	3.51	2.37	....	1.58	3.05	1.60	....
1955	1.753	....	2.47	2.82	3.06	3.53	2.53	....	2.18	3.16	1.89	1.78
1956	2.658	....	3.19	3.18	3.36	3.88	2.93	....	3.31	3.77	2.77	2.73
1957	3.267	....	3.98	3.65	3.89	4.71	3.60	....	3.81	4.20	3.12	3.11
1958	1.839	....	2.84	3.32	3.79	4.73	3.56	....	2.46	3.83	2.15	1.57
1959	3.405	3.832	4.46	4.33	4.38	5.05	3.95	....	3.97	4.48	3.36	3.30
1960	2.928	3.247	3.98	4.12	4.41	5.19	3.73	....	3.85	4.82	3.53	3.22
1961	2.378	2.605	3.54	3.88	4.35	5.08	3.46	....	2.97	4.50	3.00	1.96
1962	2.778	2.908	3.47	3.95	4.33	5.02	3.18	....	3.26	4.50	3.00	2.68
1963	3.157	3.253	3.67	4.00	4.26	4.86	3.23	5.89	3.55	4.50	3.23	3.18
1964	3.549	3.686	4.03	4.19	4.40	4.83	3.22	5.82	3.97	4.50	3.55	3.50
1965	3.954	4.055	4.22	4.28	4.49	4.87	3.27	5.81	4.38	4.54	4.04	4.07
1966	4.881	5.082	5.23	4.92	5.13	5.67	3.82	6.25	5.55	5.63	4.50	5.11
1967	4.321	4.630	5.03	5.07	5.51	6.23	3.98	6.46	5.10	5.61	4.19	4.22
1968	5.339	5.470	5.68	5.65	6.18	6.94	4.51	6.97	5.90	6.30	5.16	5.66
1969	6.677	6.853	7.02	6.67	7.03	7.81	5.81	7.80	7.83	7.96	5.87	8.20
1970	6.458	6.562	7.29	7.35	8.04	9.11	6.51	8.45	7.71	7.91	5.95	7.18
1971	4.348	4.511	5.65	6.16	7.39	8.56	5.70	7.74	5.11	5.72	4.88	4.66
1972	4.071	4.466	5.72	6.21	7.21	8.16	5.27	7.60	4.73	5.25	4.50	4.43
1973	7.041	7.178	6.95	6.84	7.44	8.24	5.18	7.96	8.15	8.03	6.44	8.73
1974	7.886	7.926	7.82	7.56	8.57	9.50	6.09	8.92	9.84	10.81	7.83	10.50
1975	5.838	6.122	7.49	7.99	8.83	10.61	6.89	9.00	6.32	7.86	6.25	5.82
1976	4.989	5.266	6.77	7.61	8.43	9.75	6.49	9.00	5.34	6.84	5.50	5.04
1977	5.265	5.510	6.69	7.42	8.02	8.97	5.56	9.02	5.61	6.83	5.46	5.54
1978	7.221	7.572	8.29	8.41	8.73	9.49	5.90	9.56	7.99	9.06	7.46	7.93
1979	10.041	10.017	9.71	9.44	9.63	10.69	6.39	10.78	10.91	12.67	10.28	11.19
1980	11.506	11.374	11.55	11.46	11.94	13.67	8.51	12.66	12.29	15.27	11.77	13.36
1981	14.029	13.776	14.44	13.91	14.17	16.04	11.23	14.70	14.76	18.87	13.42	16.38
1982	10.686	11.084	12.92	13.00	13.79	16.11	11.57	15.14	11.89	14.86	11.02	12.26
1983	8.63	8.75	10.45	11.10	12.04	13.55	9.47	12.57	8.89	10.79	8.50	9.09
1984	9.58	9.80	11.89	12.44	12.71	14.19	10.15	12.38	10.16	12.04	8.80	10.23
1985	7.48	7.66	9.64	10.62	11.37	12.72	9.18	11.55	8.01	9.93	7.69	8.10
1986	5.98	6.03	7.06	7.68	9.02	10.39	7.38	10.17	6.39	8.33	6.33	6.81
1987	5.82	6.05	7.68	8.39	9.38	10.58	7.73	9.31	6.85	8.22	5.66	6.66
										High-low	High-low	
1982:												
Jan	12.412	12.930	14.64	14.59	15.18	17.10	13.16	15.25	13.35	15.75–15.75	12.00–12.00	13.22
Feb	13.780	13.709	14.73	14.43	15.27	17.18	12.81	15.12	14.27	17.00–15.75	12.00–12.00	14.78
Mar	12.493	12.621	14.13	13.86	14.58	16.82	12.72	15.67	13.47	16.50–16.50	12.00–12.00	14.68
Apr	12.821	12.861	14.18	13.87	14.46	16.78	12.45	15.84	13.64	16.50–16.50	12.00–12.00	14.94
May	12.148	12.220	13.77	13.62	14.26	16.64	11.99	15.89	13.02	16.50–16.50	12.00–12.00	14.45
June	12.108	12.310	14.48	14.30	14.81	16.92	12.42	15.40	13.79	16.50–16.50	12.00–12.00	14.15
July	11.914	12.236	14.00	13.95	14.61	16.80	12.11	15.70	13.00	16.50–15.50	12.00–11.50	12.59
Aug	9.006	10.105	12.62	13.06	13.71	16.32	11.12	15.68	10.80	15.50–13.50	11.50–10.00	10.12
Sept	8.196	9.539	12.03	12.34	12.94	15.63	10.61	14.98	10.86	13.50–13.50	10.00–10.00	10.31
Oct	7.750	8.299	10.62	10.91	12.12	14.73	9.59	14.41	9.21	13.50–12.00	10.00– 9.50	9.71
Nov	8.042	8.319	9.98	10.55	11.68	14.30	9.97	13.81	8.72	12.00–11.50	9.50– 9.00	9.20
Dec	8.013	8.225	9.88	10.54	11.83	14.14	9.91	13.69	8.50	11.50–11.50	9.00– 8.50	8.95

[1] Rate on new issues within period; bank-discount basis.

[2] Yields on the more actively traded issues adjusted to constant maturities by the Treasury Department.

[3] Series excludes public utility issues for January 17, 1984 through October 11, 1984 due to lack of appropriate issues.

[4] Effective rate (in the primary market) on conventional mortgages, reflecting fees and charges as well as contract rate and assuming, on the average, repayment at end of 10 years. Rates beginning January 1973 not strictly comparable with prior rates.

See next page for continuation of table.

TABLE B–71.—*Bond yields and interest rates, 1929–87*—Continued

[Percent per annum]

Year and month	U.S. Treasury securities				Corporate bonds (Moody's)		High-grade municipal bonds (Standard & Poor's)	New-home mortgage yields (FHLBB)[4]	Commercial paper, 6 months[5]	Prime rate charged by banks[6]	Discount rate, Federal Reserve Bank of New York[8]	Federal funds rate[7]
	Bills (new issues)[1]		Constant maturities[2]									
	3-month	6-month	3-year	10-year	Aaa[3]	Baa						
1983:												
Jan	7.810	7.898	9.64	10.46	11.79	13.94	9.45	13.49	8.15	11.50–11.00	8.50– 8.50	8.68
Feb	8.130	8.233	9.91	10.72	12.01	13.95	9.48	13.16	8.39	11.00–10.50	8.50– 8.50	8.51
Mar	8.304	8.325	9.84	10.51	11.73	13.61	9.16	13.41	8.48	10.50–10.50	8.50– 8.50	8.77
Apr	8.252	8.343	9.76	10.40	11.51	13.29	8.96	12.42	8.48	10.50–10.50	8.50– 8.50	8.80
May	8.19	8.20	9.66	10.38	11.46	13.09	9.03	12.67	8.31	10.50–10.50	8.50– 8.50	8.63
June	8.82	8.89	10.32	10.85	11.74	13.37	9.51	12.36	9.03	10.50–10.50	8.50– 8.50	8.98
July	9.12	9.29	10.90	11.38	12.15	13.39	9.46	12.50	9.36	10.50–10.50	8.50– 8.50	9.37
Aug	9.39	9.53	11.30	11.85	12.51	13.64	9.72	12.38	9.68	11.00–10.50	8.50– 8.50	9.56
Sept	9.05	9.19	11.07	11.65	12.37	13.55	9.57	12.54	9.28	11.00–11.00	8.50– 8.50	9.45
Oct	8.71	8.90	10.87	11.54	12.25	13.46	9.64	12.25	8.98	11.00–11.00	8.50– 8.50	9.48
Nov	8.71	8.89	10.96	11.69	12.41	13.61	9.79	12.34	9.09	11.00–11.00	8.50– 8.50	9.34
Dec	8.96	9.14	11.13	11.83	12.57	13.75	9.90	12.42	9.50	11.00–11.00	8.50– 8.50	9.47
1984:												
Jan	8.93	9.06	10.93	11.67	12.20	13.65	9.61	12.29	9.18	11.00–11.00	8.50– 8.50	9.56
Feb	9.03	9.13	11.05	11.84	12.08	13.59	9.63	12.23	9.31	11.00–11.00	8.50– 8.50	9.59
Mar	9.44	9.58	11.59	12.32	12.57	13.99	9.92	12.02	9.86	11.50–11.00	8.50– 8.50	9.91
Apr	9.69	9.83	11.98	12.63	12.81	14.31	9.98	12.04	10.22	12.00–11.50	9.00– 8.50	10.29
May	9.90	10.31	12.75	13.41	13.28	14.74	10.55	12.18	10.87	12.50–12.00	9.00– 9.00	10.32
June	9.94	10.55	13.18	13.56	13.55	15.05	10.71	12.10	11.23	13.00–12.50	9.00– 9.00	11.06
July	10.13	10.58	13.08	13.36	13.44	15.15	10.50	12.50	11.34	13.00–13.00	9.00– 9.00	11.23
Aug	10.49	10.65	12.50	12.72	12.87	14.63	10.03	12.43	11.16	13.00–13.00	9.00– 9.00	11.64
Sept	10.41	10.51	12.34	12.52	12.66	14.35	10.17	12.53	10.94	13.00–12.75	9.00– 9.00	11.30
Oct	9.97	10.05	11.85	12.16	12.63	13.94	10.34	12.77	10.16	12.75–12.00	9.00– 9.00	9.99
Nov	8.79	8.99	10.90	11.57	12.29	13.48	10.27	12.75	9.06	12.00–11.25	9.00– 8.50	9.43
Dec	8.16	8.36	10.56	11.50	12.13	13.40	10.04	12.55	8.55	11.25–10.75	8.50– 8.00	8.38
1985:												
Jan	7.76	8.03	10.43	11.38	12.08	13.26	9.55	12.27	8.15	10.75–10.50	8.00– 8.00	8.35
Feb	8.22	8.34	10.55	11.51	12.13	13.23	9.66	12.21	8.69	10.50–10.50	8.00– 8.00	8.50
Mar	8.57	8.92	11.05	11.86	12.56	13.69	9.79	11.92	9.23	10.50–10.50	8.00– 8.00	8.58
Apr	8.00	8.31	10.49	11.43	12.23	13.51	9.48	12.05	8.47	10.50–10.50	8.00– 8.00	8.27
May	7.56	7.75	9.75	10.85	11.72	13.15	9.08	12.01	7.88	10.50–10.00	8.00– 7.50	7.97
June	7.01	7.16	9.05	10.16	10.94	12.40	8.78	11.75	7.38	10.00– 9.50	7.50– 7.50	7.53
July	7.05	7.16	9.18	10.31	10.97	12.43	8.90	11.34	7.57	9.50– 9.50	7.50– 7.50	7.88
Aug	7.18	7.35	9.31	10.33	11.05	12.50	9.18	11.24	7.74	9.50– 9.50	7.50– 7.50	7.90
Sept	7.08	7.27	9.37	10.37	11.07	12.48	9.37	11.17	7.86	9.50– 9.50	7.50– 7.50	7.92
Oct	7.17	7.32	9.25	10.24	11.02	12.36	9.24	11.09	7.79	9.50– 9.50	7.50– 7.50	7.99
Nov	7.20	7.26	8.88	9.78	10.55	11.99	8.64	11.01	7.69	9.50– 9.50	7.50– 7.50	8.05
Dec	7.07	7.09	8.40	9.26	10.16	11.58	8.51	10.94	7.62	9.50– 9.50	7.50– 7.50	8.27
1986:												
Jan	7.04	7.13	8.41	9.19	10.05	11.44	8.06	10.89	7.62	9.50– 9.50	7.50– 7.50	8.14
Feb	7.03	7.08	8.10	8.70	9.67	11.11	7.44	10.68	7.54	9.50– 9.50	7.50– 7.50	7.86
Mar	6.59	6.60	7.30	7.78	9.00	10.49	7.07	10.50	7.08	9.50– 9.00	7.50– 7.00	7.48
Apr	6.06	6.07	6.86	7.30	8.79	10.19	7.32	10.27	6.47	9.00– 8.50	7.00– 6.50	6.99
May	6.12	6.16	7.27	7.71	9.09	10.29	7.67	10.22	6.53	8.50– 8.50	6.50– 6.50	6.85
June	6.21	6.28	7.41	7.80	9.13	10.34	7.98	10.15	6.63	8.50– 8.50	6.50– 6.50	6.92
July	5.84	5.85	6.86	7.30	8.88	10.16	7.62	10.30	6.24	8.50– 8.00	6.50– 6.00	6.56
Aug	5.57	5.58	6.49	7.17	8.72	10.18	7.31	10.26	5.83	8.00– 7.50	6.00– 5.50	6.17
Sept	5.19	5.31	6.62	7.45	8.89	10.21	7.14	10.17	5.61	7.50– 7.50	5.50– 5.50	5.89
Oct	5.18	5.26	6.56	7.43	8.86	10.24	7.12	10.02	5.61	7.50– 7.50	5.50– 5.50	5.85
Nov	5.35	5.42	6.46	7.25	8.68	10.07	6.86	9.91	5.69	7.50– 7.50	5.50– 5.50	6.04
Dec	5.49	5.53	6.43	7.11	8.49	9.97	6.93	9.69	5.88	7.50– 7.50	5.50– 5.50	6.91
1987:												
Jan	5.45	5.47	6.41	7.08	8.36	9.72	6.63	9.51	5.76	7.50–7.50	5.50–5.50	6.43
Feb	5.59	5.60	6.56	7.25	8.38	9.65	6.66	9.23	5.99	7.50–7.50	5.50–5.50	6.10
Mar	5.56	5.56	6.58	7.25	8.36	9.61	6.71	9.14	6.10	7.50–7.50	5.50–5.50	6.13
Apr	5.76	5.93	7.32	8.02	8.85	10.04	7.62	9.21	6.50	7.75–7.75	5.50–5.50	6.37
May	5.75	6.11	8.02	8.61	9.33	10.51	8.10	9.37	7.04	8.25–8.00	5.50–5.50	6.85
June	5.69	5.99	7.82	8.40	9.32	10.52	7.89	9.45	7.00	8.25–8.25	5.50–5.50	6.73
July	5.78	5.86	7.74	8.45	9.42	10.61	7.83	9.41	6.72	8.25–8.25	5.50–5.50	6.58
Aug	6.00	6.14	8.03	8.76	9.67	10.80	7.90	9.38	6.81	8.25–8.25	5.50–5.50	6.73
Sept	6.32	6.57	8.67	9.42	10.18	11.31	8.36	9.37	7.55	8.75–8.25	6.00–5.50	7.22
Oct	6.40	6.86	8.75	9.52	10.52	11.62	8.84	9.25	7.96	9.25–8.75	6.00–6.00	7.29
Nov	5.81	6.23	7.99	8.86	10.01	11.23	8.09	9.30	7.17	9.00–8.75	6.00–6.00	6.69
Dec	5.80	6.36	8.13	8.99	10.11	11.29	8.07	9.15	7.49	8.75–8.75	6.00–6.00	6.77

---

[5] Bank-discount basis; prior to November 1979, data are for 4–6 months paper.

[6] For monthly data, high and low for the period. Prime rate for 1929–33 and 1947–48 are ranges of the rate in effect during the period.

[7] Since July 19, 1975, the daily effective rate is an average of the rates on a given day weighted by the volume of transactions at these rates. Prior to that date, the daily effective rate was the rate considered most representative of the day's transactions, usually the one at which most transactions occurred.

[8] From October 30, 1942, to April 24, 1946, a preferential rate of 0.50 percent was in effect for advances secured by Government securities maturing in 1 year or less.

Sources: Department of the Treasury, Board of Governors of the Federal Reserve System, Federal Home Loan Bank Board (FHLBB), Moody's Investors Service, and Standard & Poor's Corporation.

TABLE B-72.—*Total funds raised in credit markets by nonfinancial sectors, 1978–87*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Item	1978	1979	1980	1981	1982	1983	1984	1985	1986
	Net credit market borrowing by nonfinancial sectors								
Total net borrowing by domestic nonfinancial sectors	371.9	385.7	341.7	375.9	388.9	550.2	753.9	854.8	829.9
U.S. Government	53.7	37.4	79.2	87.4	161.3	186.6	198.8	223.6	215.0
Treasury issues	55.1	38.8	79.8	87.8	162.1	186.7	199.0	223.7	214.7
Agency issues and mortgages	−1.4	−1.4	−.6	−.5	−.9	−.1	−.2	−.1	.4
Private domestic nonfinancial sectors	318.2	348.4	262.5	288.5	227.6	363.6	555.1	631.1	614.9
Debt capital instruments	200.7	212.5	189.1	155.5	148.3	253.4	313.6	447.8	450.9
Tax-exempt obligations	28.4	30.3	30.3	23.4	44.2	53.7	50.4	136.4	30.8
Corporate bonds	21.1	17.3	27.7	22.8	18.7	16.0	46.1	73.8	121.3
Mortgages	151.2	164.9	131.2	109.3	85.4	183.6	217.1	237.7	298.8
Home mortgages	110.2	116.6	94.2	72.2	50.5	117.5	129.7	151.9	199.4
Multi-family residential	10.9	10.0	7.6	4.8	5.4	14.2	25.1	29.2	33.1
Commercial	21.9	24.4	19.2	22.2	25.2	49.3	63.2	62.5	74.6
Farm	8.2	14.0	10.2	10.0	4.2	2.6	−.9	−6.0	−8.4
Other debt instruments	117.6	135.9	73.3	133.0	79.3	110.2	241.5	183.3	164.0
Consumer credit	46.7	42.7	2.9	21.8	19.3	56.6	90.4	94.6	65.8
Bank loans n.e.c.	40.3	48.5	36.5	48.1	50.4	23.3	67.1	38.6	66.5
Open-market paper	2.7	9.0	4.0	14.7	−6.1	−.8	21.7	14.6	−9.3
Other	27.9	35.7	30.0	48.5	15.8	31.3	62.2	35.5	41.0
By borrowing sector:	318.2	348.4	262.5	288.5	227.6	363.6	555.1	631.1	614.9
State and local governments	16.5	17.6	17.2	6.8	21.5	34.0	27.4	91.8	44.3
Households	167.2	173.7	118.4	120.7	90.0	188.2	234.6	293.4	279.3
Nonfinancial business	134.5	157.1	126.8	161.1	116.1	141.4	293.0	245.9	291.2
Farm	15.6	23.5	15.2	16.6	6.8	4.1	−.1	−13.9	−15.1
Nonfarm noncorporate	33.8	37.9	31.8	38.5	40.2	77.0	97.0	93.1	116.1
Corporate	85.2	95.7	79.8	106.0	69.0	60.3	196.0	166.7	190.2
Foreign net borrowing in United States	24.0	15.0	24.2	23.5	16.0	17.3	8.3	1.2	9.0
Bonds	4.0	3.7	1.2	5.5	6.6	3.1	3.8	3.8	2.6
Bank loans n.e.c.	18.3	3.1	11.8	3.0	−5.5	3.6	−6.6	−2.8	−1.0
Open-market paper	1.0	1.7	2.4	3.9	1.9	6.5	6.2	6.2	11.5
U.S. Government loans	.7	6.5	8.8	11.1	13.0	4.1	5.0	−6.0	−4.0
Total domestic plus foreign	395.9	400.7	365.8	399.4	404.8	567.5	762.2	856.0	838.9
	Direct and indirect supply of funds to credit markets								
Total funds supplied to domestic nonfinancial sectors	371.9	385.7	341.7	375.9	388.9	550.2	753.9	854.8	829.9
Private domestic nonfinancial sectors	220.0	252.6	231.3	295.8	311.5	389.9	517.1	496.7	379.4
Deposits and currency	148.4	147.5	183.2	217.9	205.5	232.8	320.4	223.5	291.8
Checkable deposits and currency	26.2	27.9	16.7	28.1	27.7	42.9	36.5	53.8	112.8
Time and savings deposits	108.3	74.8	128.3	84.0	133.6	207.3	235.1	146.3	110.9
Money market fund shares	6.4	33.0	28.5	102.2	33.5	−39.0	49.0	8.9	43.8
Security repurchase agreements	5.5	6.7	6.8	5.2	11.1	18.5	5.0	16.6	18.3
Foreign deposits	2.0	5.1	2.8	−1.7	−.4	3.1	−5.1	−2.1	5.9
Credit market instruments	71.5	105.1	48.2	77.9	106.0	157.0	196.7	273.2	87.6
Foreign funds	36.9	16.0	.2	1.8	−7.7	40.0	63.3	80.1	115.0
At banks	7.3	26.4	−25.1	−23.7	−31.4	16.3	5.4	17.7	12.4
Credit market instruments	29.7	−10.4	25.3	25.5	23.7	23.7	57.9	62.3	102.6
U.S. Government and related loans, net	3.2	16.9	4.8	10.5	10.4	5.2	16.5	37.2	30.0
U.S. Government cash balances	6.8	.4	−2.6	−1.1	6.1	−5.3	4.0	10.3	1.7
Private insurance and pension reserves	76.0	74.7	86.1	83.4	106.0	109.7	118.6	141.0	152.8
Other sources	29.0	25.1	21.8	−14.5	−37.4	10.8	34.4	89.6	151.1

See next page for continuation of table.

TABLE B-72.—*Total funds raised in credit markets by nonfinancial sectors, 1978–87*—Continued

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Item	1986				1987		
	I	II	III	IV	I	II	III
	Net credit market borrowing by nonfinancial sectors						
Total net borrowing by domestic nonfinancial sectors	565.0	793.1	932.5	1,029.0	512.9	758.2	605.7
U.S. Government	188.5	226.0	210.4	235.2	162.3	139.1	68.0
Treasury issues	188.8	226.0	208.9	235.0	162.4	141.0	68.5
Agency issues and mortgages	−.3	.0	−1.5	.2	−.1	−1.9	−.5
Private domestic nonfinancial sectors	376.5	567.1	722.0	793.8	350.6	619.1	537.7
Debt capital instruments	323.5	407.6	587.1	485.3	444.1	459.3	442.9
Tax-exempt obligations	−45.4	14.2	137.1	17.3	46.9	18.6	37.9
Corporate bonds	129.7	140.8	113.7	100.8	146.9	108.0	135.2
Mortgages	239.2	252.6	336.2	367.2	250.3	332.7	269.9
Home mortgages	143.1	184.7	246.4	223.6	178.7	238.1	188.2
Multi-family residential	37.0	25.7	36.8	32.8	28.2	31.2	28.2
Commercial	65.8	53.6	59.0	120.2	55.7	69.8	56.5
Farm	−6.7	−11.3	−6.0	−9.4	−12.3	−6.4	−2.9
Other debt instruments	53.0	159.5	135.0	308.5	−93.6	159.8	94.8
Consumer credit	62.3	79.8	85.2	36.0	6.1	32.8	40.4
Bank loans n.e.c.	−22.9	47.2	14.8	226.8	−124.8	75.6	34.8
Open-market paper	−16.2	−10.1	5.2	−16.3	−1.8	10.8	−12.0
Other	29.8	42.7	29.8	61.9	26.9	40.8	31.6
By borrowing sector:	376.5	567.1	722.0	793.8	350.6	619.1	537.7
State and local governments	−21.5	30.1	138.3	30.4	45.7	25.0	39.2
Households	195.5	270.4	352.6	298.8	161.2	286.7	264.3
Nonfinancial business	202.5	266.6	231.2	464.6	143.7	307.5	234.3
Farm	−14.8	−19.0	−13.4	−13.3	−23.0	−12.0	−4.5
Nonfarm noncorporate	103.9	89.6	99.9	171.1	78.9	122.7	83.3
Corporate	113.3	196.1	144.6	306.9	87.8	196.8	155.6
Foreign net borrowing in United States	34.7	8.2	16.5	−23.5	−10.1	−3.4	23.7
Bonds	18.2	−5.8	2.4	−4.6	2.7	−4.8	5.6
Bank loans n.e.c.	−1.5	4.5	−7.7	.6	−2.3	−4.1	−1.3
Open-market paper	20.3	17.9	15.8	−8.1	−4.3	−6.2	21.4
U.S. Government loans	−2.3	−8.4	6.0	−11.4	−6.2	11.7	−2.0
Total domestic plus foreign	599.8	801.3	949.0	1,005.5	502.7	754.9	629.4
	Direct and indirect supply of funds to credit markets						
Total funds supplied to domestic nonfinancial sectors	565.0	793.1	932.5	1,029.0	512.9	758.2	605.7
Private domestic nonfinancial sectors	302.4	300.8	350.7	563.6	88.5	280.7	398.2
Deposits and currency	262.8	261.0	319.9	323.3	−64.4	139.3	294.3
Checkable deposits and currency	81.7	99.6	85.4	184.7	−73.1	45.6	96.9
Time and savings deposits	130.1	100.4	119.9	93.5	35.4	64.3	100.2
Money market fund shares	41.7	52.2	64.7	16.5	−6.9	.7	23.3
Security repurchase ageements	4.5	15.4	35.9	17.1	15.7	29.8	52.4
Foreign deposits	4.8	−6.6	14.1	11.6	−35.5	−1.1	21.5
Credit market instruments	39.6	39.8	30.8	240.3	152.9	141.4	103.9
Foreign funds	127.2	122.5	128.8	81.7	110.3	109.1	97.2
At banks	44.4	−19.7	5.6	19.5	45.2	29.1	48.7
Credit market instruments	82.7	142.2	123.2	62.3	65.0	80.0	48.4
U.S. Government and related loans, net	−34.8	24.0	35.8	94.8	−21.1	19.2	−28.3
U.S. Government cash balances	−23.7	15.2	19.4	−4.2	−34.7	43.4	30.9
Private insurance and pension reserves	140.9	132.3	236.7	101.2	277.3	156.0	231.6
Other sources	53.0	198.2	161.1	191.9	92.6	149.9	−123.8

Source: Board of Governors of the Federal Reserve System.

TABLE B–73.—*Mortgage debt outstanding by type of property and of financing, 1939–87*

[Billions of dollars]

End of year or quarter	All properties	Farm properties	Nonfarm properties				Nonfarm properties by type of mortgage					
							Government underwritten				Conventional [2]	
								1- to 4-family houses				
			Total	1- to 4-family houses	Multifamily properties	Commercial properties	Total [1]	Total	FHA insured	VA guaranteed	Total	1- to 4-family houses
1939	35.5	6.6	28.9	16.3	5.6	7.0	1.8	1.8	1.8	....	27.1	14.5
1940	36.5	6.5	30.0	17.4	5.7	6.9	2.3	2.3	2.3	....	27.7	15.1
1941	37.6	6.4	31.2	18.4	5.9	7.0	3.0	3.0	3.0	....	28.2	15.4
1942	36.7	6.0	30.8	18.2	5.8	6.7	3.7	3.7	3.7	....	27.1	14.5
1943	35.3	5.4	29.9	17.8	5.8	6.3	4.1	4.1	4.1	....	25.8	13.7
1944	34.7	4.9	29.7	17.9	5.6	6.2	4.2	4.2	4.2	....	25.5	13.7
1945	35.5	4.8	30.8	18.6	5.7	6.4	4.3	4.3	4.1	0.2	26.5	14.3
1946	41.8	4.9	36.9	23.0	6.1	7.7	6.3	6.1	3.7	2.4	30.6	16.9
1947	48.9	5.1	43.9	28.2	6.6	9.1	9.8	9.3	3.8	5.5	34.1	18.9
1948	56.2	5.3	50.9	33.3	7.5	10.2	13.6	12.5	5.3	7.2	37.3	20.8
1949	62.7	5.6	57.1	37.6	8.6	10.8	17.1	15.0	6.9	8.1	40.0	22.6
1950	72.8	6.1	66.7	45.2	10.1	11.5	22.1	18.8	8.5	10.3	44.7	26.3
1951	82.3	6.7	75.6	51.7	11.5	12.5	26.6	22.9	9.7	13.2	49.1	28.9
1952	91.4	7.2	84.2	58.5	12.3	13.4	29.3	25.4	10.8	14.6	54.9	33.2
1953	101.3	7.7	93.6	66.1	12.9	14.5	32.1	28.1	12.0	16.1	61.5	38.0
1954	113.7	8.2	105.4	75.7	13.5	16.3	36.2	32.1	12.8	19.3	69.3	43.6
1955	129.9	9.0	120.9	88.2	14.3	18.3	42.9	38.9	14.3	24.6	78.0	49.3
1956	144.5	9.8	134.6	99.0	14.9	20.7	47.8	43.9	15.5	28.4	86.8	55.1
1957	156.5	10.4	146.1	107.6	15.3	23.2	51.6	47.2	16.5	30.7	94.6	60.4
1958	171.8	11.1	160.7	117.7	16.8	26.1	55.2	50.1	19.7	30.4	105.5	67.6
1959	190.8	12.1	178.7	130.9	18.7	29.2	59.3	53.8	23.8	30.0	119.4	77.0
1960	207.5	12.8	194.7	141.9	20.3	32.4	62.3	56.4	26.7	29.7	132.3	85.5
1961	228.0	13.9	214.1	154.6	23.0	36.5	65.6	59.1	29.5	29.6	148.5	95.5
1962	251.4	15.2	236.2	169.3	25.8	41.1	69.4	62.2	32.3	29.9	166.9	107.1
1963	278.5	16.8	261.7	186.4	29.0	46.2	73.4	65.9	35.0	30.9	188.2	120.5
1964	305.9	18.9	287.0	203.4	33.6	50.0	77.2	69.2	38.3	30.9	209.8	134.1
1965	333.3	21.2	312.1	220.5	37.2	54.5	81.2	73.1	42.0	31.1	231.0	147.4
1966	356.5	23.1	333.4	232.9	40.3	60.1	84.1	76.1	44.8	31.3	249.3	156.9
1967	381.2	25.1	356.1	247.3	43.9	64.8	88.2	79.9	47.4	32.5	267.9	167.4
1968	410.9	27.4	383.5	264.8	47.3	71.4	93.4	84.4	50.6	33.8	290.1	180.4
1969	441.4	29.2	412.2	283.2	52.2	76.9	100.2	90.2	54.5	35.7	312.0	193.0
1970	473.5	30.3	443.2	297.4	60.1	85.6	109.2	97.3	59.9	37.3	333.9	200.2
1971	524.0	32.2	491.8	325.9	70.1	95.9	120.7	105.2	65.7	39.5	371.1	220.7
1972	597.1	35.1	562.0	366.5	82.8	112.7	131.1	113.0	68.2	44.7	430.9	253.5
1973	672.3	39.5	632.8	407.9	93.1	131.7	135.0	116.2	66.2	50.0	497.7	291.7
1974	732.3	44.7	687.5	440.7	100.0	146.9	140.2	121.3	65.1	56.2	547.3	319.4
1975	791.7	49.7	742.0	482.1	100.5	159.3	147.0	127.7	66.1	61.6	595.0	354.3
1976	878.5	55.3	823.2	546.3	105.7	171.2	154.1	133.5	66.5	67.0	669.0	412.8
1977	1,009.8	63.5	946.4	642.7	114.0	189.7	161.7	141.6	68.0	73.6	784.6	501.0
1978	1,161.9	71.6	1,090.2	753.5	124.9	211.8	176.4	153.4	71.4	82.0	913.9	600.2
1979	1,327.3	85.6	1,241.7	870.5	134.9	236.3	199.0	172.9	81.0	92.0	1,042.7	697.6
1980	1,457.4	95.6	1,361.8	964.0	142.3	255.5	225.1	195.2	93.6	101.6	1,136.7	768.8
1981	1,563.1	105.8	1,457.3	1,037.6	142.1	277.5	238.9	207.6	101.3	106.2	1,218.4	830.1
1982	1,631.7	110.0	1,521.7	1,074.1	145.9	301.7	248.9	217.9	108.0	109.9	1,272.8	856.3
1983	1,814.9	112.6	1,702.3	1,189.7	161.0	351.6	279.8	248.8	127.4	121.4	1,422.5	940.9
1984	2,035.2	111.6	1,923.6	1,318.5	185.6	419.4	294.8	265.9	136.7	129.1	1,628.8	1,052.7
1985	2,269.2	105.7	2,163.5	1,467.4	214.0	482.0	328.3	288.8	153.0	135.8	1,835.2	1,178.6
1986	2,566.7	96.8	2,470.0	1,666.4	247.0	556.6	370.7	328.9	185.5	143.4	2,099.2	1,337.6
1985: I	2,081.6	111.9	1,969.6	1,346.1	191.0	432.5	299.7	270.6	139.8	130.8	1,669.9	1,075.5
II	2,140.5	110.9	2,029.7	1,382.8	197.7	449.2	305.4	276.0	144.3	131.6	1,724.3	1,106.8
III	2,201.3	108.3	2,093.0	1,424.9	203.8	464.3	323.8	282.6	148.3	134.3	1,769.1	1,142.2
IV	2,269.2	105.7	2,163.5	1,467.4	214.0	482.0	328.3	288.9	153.0	135.8	1,835.2	1,178.6
1986: I	2,318.3	103.8	2,214.5	1,495.3	221.9	497.4	339.9	299.1	160.6	138.5	1,874.7	1,196.2
II	2,386.5	101.1	2,285.3	1,544.4	229.5	511.4	349.7	308.3	168.9	139.4	1,935.6	1,236.2
III	2,472.3	99.5	2,372.8	1,607.9	237.8	527.2	360.4	319.5	176.8	142.7	2,012.3	1,288.4
IV	2,566.7	96.8	2,470.0	1,666.4	247.0	556.6	370.7	328.9	185.5	143.4	2,099.2	1,337.6
1987: I	2,662.3	93.6	2,568.8	1,712.1	257.3	599.4	386.6	344.6	196.6	147.9	2,182.2	1,367.5
II	2,754.5	92.2	2,662.3	1,778.3	266.4	617.6	403.7	360.9	211.6	149.3	2,258.6	1,417.4
III	2,827.6	91.3	2,736.4	1,830.4	272.8	633.2	421.8	378.7	226.9	151.8	2,314.6	1,433.0

---

[1] Includes FHA insured multifamily properties, not shown separately.

[2] Derived figures. Total includes multifamily and commercial properties, not shown separately.

Source: Board of Governors of the Federal Reserve System, based on data from various Government and private organizations.

TABLE B–74.—*Mortgage debt outstanding by holder, 1939–87*

[Billions of dollars]

End of year or quarter	Total	Major financial institutions				Other holders	
		Total	Savings institutions [1]	Commercial banks [2]	Life insurance companies	Federal and related agencies [3]	Individuals and others
1939	35.5	18.6	8.6	4.3	5.7	5.0	11.9
1940	36.5	19.5	9.0	4.6	6.0	4.9	12.0
1941	37.6	20.7	9.4	4.9	6.4	4.7	12.2
1942	36.7	20.7	9.2	4.7	6.7	4.3	11.7
1943	35.3	20.2	9.0	4.5	6.7	3.6	11.5
1944	34.7	20.2	9.1	4.4	6.7	3.0	11.5
1945	35.5	21.0	9.6	4.8	6.6	2.4	12.1
1946	41.8	26.0	11.5	7.2	7.2	2.0	13.8
1947	48.9	31.8	13.8	9.4	8.7	1.8	15.3
1948	56.2	37.8	16.1	10.9	10.8	1.8	16.6
1949	62.7	42.9	18.3	11.6	12.9	2.3	17.5
1950	72.8	51.7	22.0	13.7	16.1	2.8	18.4
1951	82.3	59.5	25.5	14.7	19.3	3.5	19.3
1952	91.4	66.9	29.8	15.9	21.3	4.1	20.4
1953	101.3	75.1	34.9	16.9	23.3	4.6	21.7
1954	113.7	85.7	41.1	18.6	26.0	4.8	23.2
1955	129.9	99.3	48.9	21.0	29.4	5.3	25.3
1956	144.5	111.2	55.4	22.7	33.0	6.2	27.1
1957	156.5	119.7	61.2	23.3	35.2	7.7	29.1
1958	171.8	131.5	68.9	25.5	37.1	8.0	32.3
1959	190.8	145.5	78.1	28.1	39.2	10.2	35.1
1960	207.5	157.6	87.0	28.8	41.8	11.5	38.4
1961	228.0	172.6	97.9	30.4	44.2	12.2	43.1
1962	251.4	192.5	111.1	34.5	46.9	12.6	46.3
1963	278.5	217.1	127.1	39.4	50.5	11.8	49.5
1964	305.9	241.0	141.9	44.0	55.2	12.2	52.7
1965	333.3	264.6	154.9	49.7	60.0	13.5	55.2
1966	356.5	280.8	161.7	54.4	64.6	17.5	58.2
1967	381.2	298.8	172.3	59.0	67.5	20.9	61.4
1968	410.9	319.9	184.3	65.7	70.0	25.1	65.9
1969	441.4	339.1	196.3	70.7	72.0	31.1	71.2
1970	473.5	355.9	208.2	73.3	74.4	38.3	79.3
1971	524.0	394.2	236.3	82.5	75.5	46.4	83.4
1972	597.1	450.0	273.8	99.3	76.9	54.6	92.5
1973	672.3	505.4	304.9	119.1	81.4	64.8	102.2
1974	732.3	542.6	324.2	132.1	86.2	82.2	107.5
1975	791.7	581.2	355.8	136.2	89.2	101.1	109.4
1976	878.5	647.5	404.6	151.3	91.6	116.7	114.3
1977	1,009.8	745.2	469.4	179.0	96.8	140.5	124.1
1978	1,161.9	848.2	528.0	214.0	106.2	170.6	143.1
1979	1,327.3	938.2	574.6	245.2	118.4	216.0	173.1
1980	1,457.4	996.8	603.1	262.7	131.1	256.8	203.8
1981	1,563.1	1,040.5	618.5	284.2	137.7	289.4	233.1
1982	1,631.7	1,021.3	578.1	301.3	142.0	355.4	255.0
1983	1,814.9	1,108.2	626.7	330.5	151.0	433.4	273.3
1984	2,035.2	1,245.9	709.7	379.5	156.7	491.1	298.3
1985	2,269.2	1,361.5	760.5	429.2	171.8	582.0	325.7
1986	2,566.7	1,473.7	777.3	502.5	193.8	733.6	359.5
1985: I	2,081.6	1,266.9	720.3	388.2	158.5	511.3	303.3
II	2,140.5	1,297.9	735.0	400.7	162.1	531.7	311.0
III	2,201.3	1,328.1	748.1	415.2	164.8	555.2	318.0
IV	2,269.2	1,361.5	760.5	429.2	171.8	582.0	325.7
1986: I	2,318.3	1,379.0	762.9	441.1	175.0	605.7	333.6
II	2,386.5	1,405.1	768.4	456.2	180.5	637.0	344.4
III	2,472.3	1,432.8	772.1	474.7	186.0	682.2	357.2
IV	2,566.7	1,473.7	777.3	502.5	193.8	733.6	359.5
1987: I	2,662.3	1,525.3	810.1	519.5	195.7	771.2	365.8
II	2,754.5	1,570.9	826.1	544.4	200.4	808.9	374.7
III	2,827.6	1,608.4	840.3	563.6	204.6	832.8	386.4

---

[1] Includes savings banks and savings and loan associations. Beginning 1987, date reported by Federal Savings and Loan Insurance Corporation-insured institutions include loans in process.

[2] Includes loans held by nondeposit trust companies, but not by bank trust departments.

[3] Includes Government National Mortgage Association (GNMA), Federal Housing Administration, Veterans Administration, Farmers Home Administration (FmHA), and in earlier years Reconstruction Finance Corporation, Homeowners Loan Corporation, Federal Farm Mortgage Corporation, and Public Housing Administration. Also includes U.S.-sponsored agencies such as Federal National Mortgage Association (FNMA), Federal Land Banks, Federal Home Loan Mortgage Corporation (FHLMC), and mortgage pass-through securities issued or guaranteed by GNMA, FHLMC, FNMA or FmHA. Other U.S. agencies (amounts small or current separate data not readily available) included with "individuals and others."

Source: Board of Governors of the Federal Reserve System, based on data from various Government and private organizations.

Table B-75.—*Consumer credit outstanding, 1950–87*

[Amount outstanding (end of month); millions of dollars, seasonally adjusted]

Year and month	Total consumer credit	Installment credit [1]					Noninstallment credit [4]
		Total	Automobile	Revolving [2]	Mobile home [3]	Other	
December:							
1950	25,018	15,166	6,035	...	...	9,131	9,852
1951	26,576	15,859	5,981	...	...	9,878	10,717
1952	31,830	20,121	7,651	...	...	12,470	11,709
1953	35,928	23,870	9,702	...	...	14,168	12,058
1954	37,293	24,470	9,755	...	...	14,715	12,823
1955	44,319	29,809	13,485	...	...	16,324	14,510
1956	48,224	32,660	14,499	...	...	18,161	15,564
1957	51,136	34,914	15,493	...	...	19,421	16,222
1958	51,595	34,736	14,267	...	...	20,469	16,859
1959	59,432	40,421	16,641	...	...	23,780	19,011
1960	63,928	44,335	18,108	...	...	26,227	19,593
1961	66,569	45,438	17,656	...	...	27,782	21,131
1962	72,830	50,375	20,001	...	...	30,374	22,455
1963	81,578	57,056	22,891	...	...	34,165	24,522
1964	91,279	64,674	25,865	...	...	38,809	26,605
1965	101,726	72,814	29,378	...	...	43,436	28,912
1966	108,227	78,162	31,024	...	...	47,138	30,065
1967	113,628	81,783	31,136	...	...	50,647	31,845
1968	124,915	90,112	34,352	2,022	...	53,738	34,803
1969	135,431	99,381	36,946	3,563	...	58,872	36,050
1970	141,010	103,905	36,348	4,900	2,433	60,224	37,105
1971	155,537	116,434	40,522	8,252	7,171	60,489	39,103
1972	175,286	131,258	47,835	9,391	9,468	64,564	44,028
1973	200,894	152,910	53,740	11,318	13,505	74,347	47,984
1974	210,634	162,203	54,241	13,232	14,582	80,148	48,431
1975	217,428	167,043	56,989	14,507	15,388	80,159	50,385
1976	241,989	187,782	66,821	16,595	15,738	88,628	54,207
1977	278,919	221,475	80,948	36,689	16,362	87,476	57,444
1978	324,999	261,976	98,739	45,202	16,921	101,114	63,023
1979	366,431	296,483	112,475	53,357	18,207	112,444	69,948
1980	369,049	295,763	111,936	54,894	18,264	110,669	73,286
1981	390,067	310,965	119,610	60,750	19,308	111,297	79,102
1982	409,471	325,136	125,440	66,007	21,728	111,961	84,335
1983	468,539	373,048	145,874	78,369	22,919	125,886	95,491
1984	561,489	446,183	172,352	99,620	24,710	149,501	115,306
1985	657,017	522,805	208,057	122,021	25,488	167,239	134,212
1986	723,595	577,784	245,055	134,938	25,710	172,081	145,811
1987 ᵖ	755,585	612,571	261,654	145,940	25,612	179,365	143,014
1986: Jan	664,820	529,126	211,530	123,921	25,574	168,101	135,694
Feb	670,520	534,193	214,321	125,504	25,667	168,701	136,327
Mar	673,867	536,589	215,457	126,539	25,750	168,843	137,278
Apr	682,310	542,525	218,021	128,905	25,703	169,896	139,785
May	687,360	546,762	221,012	129,623	25,673	170,454	140,598
June	693,205	551,770	224,407	130,737	25,806	170,820	141,435
July	700,167	558,059	227,822	132,181	25,891	172,165	142,108
Aug	706,742	563,660	231,200	133,180	25,939	173,341	143,082
Sept	715,061	571,280	239,014	133,123	25,732	173,411	143,781
Oct	721,809	576,874	243,400	133,816	25,784	173,874	144,935
Nov	723,030	577,656	243,005	134,391	25,731	174,529	145,374
Dec	723,595	577,784	245,055	134,938	25,710	172,081	145,811
1987: Jan	724,581	578,578	245,472	134,916	25,852	172,338	146,003
Feb	726,025	579,591	246,064	135,663	25,789	172,076	146,434
Mar	726,890	579,913	246,290	135,166	25,614	172,844	146,977
Apr	730,733	583,595	247,663	136,706	25,626	173,600	147,138
May	730,208	583,276	247,578	136,869	25,542	173,287	146,932
June	735,101	587,821	250,130	137,401	25,685	174,605	147,280
July	737,767	591,175	250,980	138,741	25,860	175,594	146,592
Aug	741,005	596,182	254,013	139,837	25,695	176,637	144,823
Sept	746,284	602,607	257,470	141,704	25,699	177,733	143,677
Oct	749,187	605,488	258,710	143,142	25,677	177,959	143,699
Nov	752,678	608,122	259,134	143,620	25,731	179,637	144,556
Dec ᵖ	755,585	612,571	261,654	145,940	25,612	179,365	143,014

[1] Installment credit covers most short- and intermediate-term credit extended to individuals through regular business channels, usually to finance the purchase of consumer goods and services or to refinance debts incurred for such purposes, and scheduled to be repaid (or with the option of repayment) in two or more installments. Credit secured by real estate is generally excluded.

[2] Consists of credit cards at retailers, gasoline companies, and commercial banks, and check credit at commercial banks. Excludes 30-day charge credit held by travel and entertainment companies. Prior to 1968, included in "other," except gasoline companies, included in noninstallment credit prior to 1971. Beginning 1977, includes open-end credit at retailers, previously included in "other." Also beginning 1977, some retail credit was reclassified from commercial into consumer credit.

[3] Not reported separately prior to July 1970.

[4] Noninstallment credit is credit scheduled to be repaid in a lump sum, including single-payment loans, charge accounts, and service credit. Because of inconsistencies in the data and infrequent benchmarking, series is no longer published by the Federal Reserve Board on a regular basis. Data are shown here as a general indication of trends.

Source: Board of Governors of the Federal Reserve System.

Table B–76.—*Federal receipts, outlays, surplus or deficit, and debt, selected fiscal years 1929–89*

[Billions of dollars; fiscal years]

Fiscal year or period	Total			On-budget			Off-budget			Gross Federal debt (end of period)		Addendum: Gross national product
	Receipts	Outlays	Surplus or deficit (−)	Receipts	Outlays	Surplus or deficit (−)	Receipts	Outlays	Surplus or deficit (−)	Total	Held by the public	
1929	3.9	3.1	0.7	......	......	......	......	......	......	[1] 16.9	......	......
1933	2.0	4.6	−2.6	......	......	......	......	......	......	[1] 22.5	......	......
1939	6.3	9.1	−2.8	5.8	9.2	−3.4	0.5	0.0	0.5	48.2	41.4	......
1940	6.5	9.5	−2.9	6.0	9.5	−3.5	.6	.0	.6	50.7	42.8	95.8
1941	8.7	13.7	−4.9	8.0	13.6	−5.6	.7	.0	.7	57.5	48.2	113.0
1942	14.6	35.1	−20.5	13.7	35.1	−21.3	.9	.1	.8	79.2	67.8	142.2
1943	24.0	78.6	−54.6	22.9	78.5	−55.6	1.1	.1	1.0	142.6	127.8	175.8
1944	43.7	91.3	−47.6	42.5	91.2	−48.7	1.3	.1	1.2	204.1	184.8	202.0
1945	45.2	92.7	−47.6	43.8	92.6	−48.7	1.3	.1	1.2	260.1	235.2	212.4
1946	39.3	55.2	−15.9	38.1	55.0	−17.0	1.2	.2	1.0	271.0	241.9	212.9
1947	38.5	34.5	4.0	37.1	34.2	2.9	1.5	.3	1.2	257.1	224.3	223.6
1948	41.6	29.8	11.8	39.9	29.4	10.5	1.6	.4	1.2	252.0	216.3	247.8
1949	39.4	38.8	.6	37.7	38.4	−.7	1.7	.4	1.3	252.6	214.3	263.9
1950	39.4	42.6	−3.1	37.3	42.0	−4.7	2.1	.5	1.6	256.9	219.0	266.8
1951	51.6	45.5	6.1	48.5	44.2	4.3	3.1	1.3	1.8	255.3	214.3	315.0
1952	66.2	67.7	−1.5	62.6	66.0	−3.4	3.6	1.7	1.9	259.1	214.8	342.4
1953	69.6	76.1	−6.5	65.5	73.8	−8.3	4.1	2.3	1.8	266.0	218.4	365.6
1954	69.7	70.9	−1.2	65.1	67.9	−2.8	4.6	2.9	1.7	270.8	224.5	369.5
1955	65.5	68.4	−3.0	60.4	64.5	−4.1	5.1	4.0	1.1	274.4	226.6	386.4
1956	74.6	70.6	3.9	68.2	65.7	2.5	6.4	5.0	1.5	272.8	222.2	418.1
1957	80.0	76.6	3.4	73.2	70.6	2.6	6.8	6.0	.8	272.4	219.4	440.5
1958	79.6	82.4	−2.8	71.6	74.9	−3.3	8.0	7.5	.5	279.7	226.4	450.2
1959	79.2	92.1	−12.8	71.0	83.1	−12.1	8.3	9.0	−.7	287.8	235.0	481.5
1960	92.5	92.2	.3	81.9	81.3	.5	10.6	10.9	−.2	290.9	237.2	506.7
1961	94.4	97.7	−3.3	82.3	86.0	−3.8	12.1	11.7	.4	292.9	238.6	518.2
1962	99.7	106.8	−7.1	87.4	93.3	−5.9	12.3	13.5	−1.3	303.3	248.4	557.7
1963	106.6	111.3	−4.8	92.4	96.4	−4.0	14.2	15.0	−.8	310.8	254.5	587.8
1964	112.6	118.5	−5.9	96.2	102.8	−6.5	16.4	15.7	.6	316.8	257.6	629.2
1965	116.8	118.2	−1.4	100.1	101.7	−1.6	16.7	16.5	.2	323.2	261.6	672.6
1966	130.8	134.5	−3.7	111.7	114.8	−3.1	19.1	19.7	−.6	329.5	264.7	739.0
1967	148.8	157.5	−8.6	124.4	137.0	−12.6	24.4	20.4	4.0	341.3	267.5	794.6
1968	153.0	178.1	−25.2	128.1	155.8	−27.7	24.9	22.3	2.6	369.8	290.6	849.4
1969	186.9	183.6	3.2	157.9	158.4	−.5	29.0	25.2	3.7	367.1	279.5	929.5
1970	192.8	195.6	−2.8	159.3	168.0	−8.7	33.5	27.6	5.9	382.6	284.9	990.2
1971	187.1	210.2	−23.0	151.3	177.3	−26.1	35.8	32.8	3.0	409.5	304.3	1,055.9
1972	207.3	230.7	−23.4	167.4	193.8	−26.4	39.9	36.9	3.1	437.3	323.8	1,153.1
1973	230.8	245.7	−14.9	184.7	200.1	−15.4	46.1	45.6	.5	468.4	343.0	1,281.4
1974	263.2	269.4	−6.1	209.3	217.3	−8.0	53.9	52.1	1.8	486.2	346.1	1,416.5
1975	279.1	332.3	−53.2	216.6	271.9	−55.3	62.5	60.4	2.0	544.1	396.9	1,522.5
1976	298.1	371.8	−73.7	231.7	302.2	−70.5	66.4	69.6	−3.2	631.9	480.3	1,698.2
Transition quarter	81.2	96.0	−14.7	63.2	76.6	−13.3	18.0	19.4	−1.4	646.4	498.3	[2] 1,794.7
1977	355.6	409.2	−53.6	278.7	328.5	−49.7	76.8	80.7	−3.9	709.1	551.8	1,933.0
1978	399.6	458.7	−59.2	314.2	369.1	−54.9	85.4	89.7	−4.3	780.4	610.9	2,171.8
1979	463.3	503.5	−40.2	365.3	403.5	−38.2	98.0	100.0	−2.0	833.8	644.6	2,447.8
1980	517.1	590.9	−73.8	403.9	476.6	−72.7	113.2	114.3	−1.1	914.3	715.1	2,670.6
1981	599.3	678.2	−78.9	469.1	543.0	−73.9	130.2	135.2	−5.0	1,003.9	794.4	2,986.4
1982	617.8	745.7	−127.9	474.3	594.3	−120.0	143.5	151.4	−7.9	1,147.0	929.4	3,139.1
1983	600.6	808.3	−207.8	453.2	661.2	−208.0	147.3	147.1	.2	1,381.9	1,141.8	3,321.9
1984	666.5	851.8	−185.3	500.4	686.0	−185.6	166.1	165.8	.3	1,576.7	1,312.6	3,687.6
1985	734.1	946.3	−212.3	547.9	769.5	−221.6	186.2	176.8	9.4	1,827.5	1,509.9	3,943.4
1986	769.1	990.3	−221.2	568.9	806.8	−237.9	200.2	183.5	16.7	2,130.0	1,746.1	4,192.5
1987	854.1	1,004.6	−150.4	640.7	810.8	−170.0	213.4	193.8	19.6	2,355.3	1,897.8	4,408.7
1988 [3]	909.2	1,055.9	−146.7	669.3	852.8	−183.5	239.9	203.1	36.8	2,581.6	2,025.1	4,705.8
1989 [3]	964.7	1,094.2	−129.5	706.2	880.9	−174.7	258.5	213.3	45.1	2,825.3	2,152.1	5,023.3

[1] Not strictly comparable with later data.

[2] Annual rate.

[3] Estimates.

Note.—Through fiscal year 1976, the fiscal year was on a July 1–June 30 basis; beginning October 1976 (fiscal year 1977), the fiscal year is on an October 1–September 30 basis. The 3-month period from July 1, 1976 through September 30, 1976 is a separate fiscal period known as the transition quarter.

Refunds of receipts are excluded from receipts and outlays.

See "Budget of the United States Government, Fiscal Year 1989" for additional information.

Sources: Department of the Treasury, Office of Management and Budget, and Department of Commerce (Bureau of Economic Analysis).

TABLE B–77.—*Federal receipts, outlays, and debt, fiscal years 1980–89*

[Millions of dollars; fiscal years]

Description	Actual				
	1980	1981	1982	1983	1984
RECEIPTS AND OUTLAYS:					
Total receipts	517,112	599,272	617,766	600,562	666,457
Total outlays	590,920	678,209	745,706	808,327	851,781
Total surplus or deficit (–)	–73,808	–78,936	–127,940	–207,764	–185,324
On-budget receipts	403,903	469,097	474,299	453,242	500,382
On-budget outlays	476,591	543,013	594,302	661,219	685,968
On-budget surplus or deficit (–)	–72,689	–73,916	–120,003	–207,977	–185,586
Off-budget receipts	113,209	130,176	143,467	147,320	166,075
Off-budget outlays	114,329	135,196	151,404	147,108	165,813
Off-budget surplus or deficit (–)	–1,120	–5,020	–7,937	212	262
OUTSTANDING DEBT, END OF PERIOD:					
Gross Federal debt	914,317	1,003,941	1,146,987	1,381,886	1,576,748
Held by Government accounts	199,212	209,507	217,560	240,114	264,159
Held by the public	715,105	794,434	929,427	1,141,771	1,312,589
Federal Reserve System	120,846	124,466	134,497	155,527	155,122
Other	594,259	669,968	794,930	986,244	1,157,467
RECEIPTS: ON-BUDGET AND OFF-BUDGET	517,112	599,272	617,766	600,562	666,457
Individual income taxes	244,069	285,917	297,744	288,938	298,415
Corporation income taxes	64,600	61,137	49,207	37,022	56,893
Social insurance taxes and contributions	157,803	182,720	201,498	208,994	239,376
On-budget	44,594	52,545	58,031	61,674	73,301
Off-budget	113,209	130,176	143,467	147,320	166,075
Excise taxes	24,329	40,839	36,311	35,300	37,361
Estate and gift taxes	6,389	6,787	7,991	6,053	6,010
Customs duties	7,174	8,083	8,854	8,655	11,370
Miscellaneous receipts:					
Deposits of earnings by Federal Reserve System	11,767	12,834	15,186	14,492	15,684
All other	981	956	975	1,108	1,347
OUTLAYS: ON-BUDGET AND OFF-BUDGET	590,920	678,209	745,706	808,327	851,781
National defense	133,995	157,513	185,309	209,903	227,413
International affairs	12,714	13,104	12,300	11,848	15,876
General science, space, and technology	5,832	6,469	7,200	7,935	8,317
Energy	10,156	15,166	13,527	9,353	7,086
Natural resources and environment	13,858	13,568	12,998	12,672	12,593
Agriculture	8,839	11,323	15,944	22,901	13,613
Commerce and housing credit	9,390	8,206	6,256	6,681	6,917
Transportation	21,329	23,379	20,625	21,334	23,669
Community and regional development	11,252	10,568	8,347	7,560	7,673
Education, training, employment, and social services	31,843	33,709	27,029	26,606	27,579
Health	23,169	26,866	27,445	28,641	30,417
Medicare	32,090	39,149	46,567	52,588	57,540
Income security	86,540	99,723	107,717	122,598	112,668
Social security	118,547	139,584	155,964	170,724	178,223
On-budget	675	670	844	19,993	7,056
Off-budget	117,872	138,914	155,120	150,731	171,167
Veterans benefits and services	21,185	22,991	23,958	24,846	25,614
Administration of justice	4,582	4,762	4,703	5,099	5,660
General government	13,030	11,436	10,922	11,241	11,821
Central Federal credit activities	....	....	....	....	....
Net interest	52,512	68,734	84,995	89,774	111,058
On-budget	54,851	71,022	87,065	91,619	114,368
Off-budget	–2,339	–2,288	–2,071	–1,845	–3,310
Allowances	....	....	....	....	....
Undistributed offsetting receipts	–19,942	–28,041	–26,099	–33,976	–31,957
On-budget	–18,738	–26,611	–24,453	–32,198	–29,913
Off-budget	–1,204	–1,430	–1,646	–1,778	–2,044

See next page for continuation of table.

TABLE B–77.—*Federal receipts, outlays, and debt, fiscal years 1980–89*—Continued

[Millions of dollars; fiscal years]

Description	Actual			Estimates	
	1985	1986	1987	1988	1989
RECEIPTS AND OUTLAYS:					
Total receipts	734,057	769,091	854,143	909,163	964,674
Total outlays	946,316	990,258	1,004,586	1,055,904	1,094,215
Total surplus or deficit (–)	–212,260	–221,167	–150,444	–146,741	–129,542
On-budget receipts	547,886	568,862	640,741	669,264	709,193
On-budget outlays	769,509	806,760	810,754	852,778	880,873
On-budget surplus or deficit (–)	–221,623	–237,898	–170,014	–183,514	–174,680
Off-budget receipts	186,171	200,228	213,402	239,899	258,481
Off-budget outlays	176,807	183,498	193,832	203,126	213,342
Off-budget surplus or deficit (–)	9,363	16,731	19,570	36,773	45,139
OUTSTANDING DEBT, END OF PERIOD:					
Gross Federal debt	1,827,470	2,130,031	2,355,280	2,581,556	2,825,288
Held by Government accounts	317,612	383,919	457,444	556,473	673,184
Held by the public	1,509,857	1,746,112	1,897,836	2,025,083	2,152,104
Federal Reserve System	169,806	190,855	212,040	....	....
Other	1,340,051	1,555,257	1,685,795	....	....
RECEIPTS: ON-BUDGET AND OFF-BUDGET	734,057	769,091	854,143	909,163	964,674
Individual income taxes	334,531	348,959	392,557	393,395	412,353
Corporation income taxes	61,331	63,143	83,926	105,567	117,704
Social insurance taxes and contributions	265,163	283,901	303,318	331,513	354,565
On-budget	78,992	83,673	89,916	91,614	96,084
Off-budget	186,171	200,228	213,402	239,899	258,481
Excise taxes	35,992	32,919	32,457	35,342	35,213
Estate and gift taxes	6,422	6,958	7,493	7,567	7,795
Customs duties	12,079	13,327	15,085	16,399	17,224
Miscellaneous receipts:					
Deposits of earnings by Federal Reserve System	17,059	18,374	16,817	16,053	16,421
All other	1,480	1,510	2,490	3,327	3,398
OUTLAYS: ON-BUDGET AND OFF-BUDGET	946,316	990,258	1,004,586	1,055,904	1,094,215
National defense	252,748	273,375	281,999	285,423	294,020
International affairs	16,176	14,152	11,649	9,926	13,334
General science, space, and technology	8,627	8,976	9,216	10,903	13,103
Energy	5,685	4,735	4,115	2,713	3,061
Natural resources and environment	13,357	13,639	13,363	15,139	16,024
Agriculture	25,565	31,449	27,356	22,352	21,732
Commerce and housing credit	4,229	4,890	6,182	12,364	7,862
Transportation	25,838	28,117	26,228	27,237	27,280
Community and regional development	7,680	7,233	5,051	6,321	5,879
Education, training, employment, and social services	29,342	30,585	29,724	33,652	37,362
Health	33,542	35,936	39,968	44,479	47,771
Medicare	65,822	70,164	75,120	78,857	84,015
Income security	128,200	119,796	123,250	129,560	135,573
Social security	188,623	198,757	207,353	219,717	233,769
On-budget	5,189	8,072	4,930	5,022	5,572
Off-budget	183,434	190,684	202,422	214,695	228,197
Veterans benefits and services	26,292	26,356	26,782	27,748	29,573
Administration of justice	6,277	6,603	7,548	8,970	9,894
General government	11,582	12,533	7,569	8,796	9,492
Central Federal credit activities	....	....	....	....	–6,282
Net interest	129,430	135,969	138,570	147,871	151,804
On-budget	133,548	140,298	143,860	155,142	161,940
Off-budget	–4,118	–4,329	–5,290	–7,271	–10,136
Allowances	....	....	....	....	–48
Undistributed offsetting receipts	–32,698	–33,007	–36,455	–36,123	–41,002
On-budget	–30,189	–30,150	–33,155	–31,825	–36,283
Off-budget	–2,509	–2,857	–3,300	–4,298	–4,719

Note.—Through fiscal year 1976, the fiscal year was on a July 1–June 30 basis. Beginning October 1976 (fiscal year 1977), the fiscal year is on an October 1–September 30 basis. The 3-month period from July 1, 1976 through September 30, 1976 is a separate fiscal period known as the transition quarter.

Refunds of receipts are excluded from receipts and outlays.

See "Budget of the United States Government, Fiscal Year 1989" for additional information.

Sources: Department of the Treasury and Office of Management and Budget.

TABLE B-78.—*Relation of Federal Government receipts and expenditures in the national income and product accounts to the budget, fiscal years 1987–89*

[Billions of dollars; fiscal years]

Receipts and expenditures	1987	Estimate	
		1988	1989
RECEIPTS			
Total on-budget and off-budget receipts	854.1	909.2	964.7
Government contributions for employee retirement (grossing)	35.5	38.9	41.5
Other netting and grossing	13.7	16.4	18.4
Timing adjustments	3.7	10.9	6.1
Geographic exclusions	−1.5	−1.6	−1.7
Federal sector, national income and product accounts, receipts	905.6	973.8	1,029.1
EXPENDITURES			
Total on-budget and off-budget outlays	1,004.6	1,055.9	1,094.2
Lending and financial transactions	−6.4	−9.3	−7.2
Government contributions for employee retirement (grossing)	35.5	38.9	41.5
Other netting and grossing	13.7	16.4	18.4
Defense timing adjustment	7.4	3.0	−.5
Bonuses on Outer Continental Shelf land leases	1.6	.7	1.2
Geographic exclusions	−5.5	−5.7	−6.0
Other	4.3	−1.9	4.4
Federal sector, national income and product accounts, expenditures	1,055.1	1,098.1	1,145.9

Note.—See Note, Table B-76.

See Special Analysis B, "Special Analyses, Budget of the United States Government, Fiscal Year 1989" for description of these categories.

Sources: Department of Commerce (Bureau of Economic Analysis), Department of the Treasury, and Office of Management and Budget.

TABLE B–79.—*Federal and State and local government receipts and expenditures, national income and product accounts, 1929–87*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Total government			Federal Government			State and local government		
	Receipts	Expenditures	Surplus or deficit (−), national income and product accounts	Receipts	Expenditures	Surplus or deficit (−), national income and product accounts	Receipts	Expenditures	Surplus or deficit (−), national income and product accounts
1929	11.3	10.3	1.0	3.8	2.7	1.2	7.6	7.8	−0.2
1933	9.4	10.7	−1.4	2.7	4.0	−1.3	7.2	7.2	−.1
1939	15.4	17.6	−2.2	6.8	9.0	−2.2	9.6	9.6	.0
1940	17.8	18.5	−.7	8.7	10.0	−1.3	10.0	9.3	.6
1941	25.0	28.8	−3.8	15.5	20.5	−5.1	10.4	9.1	1.3
1942	32.7	64.1	−31.4	23.0	56.1	−33.1	10.6	8.8	1.8
1943	49.2	93.4	−44.2	39.3	85.9	−46.6	10.9	8.4	2.4
1944	51.2	103.1	−51.8	41.1	95.6	−54.5	11.1	8.5	2.7
1945	53.4	92.9	−39.5	42.7	84.7	−42.1	11.6	9.0	2.6
1946	52.6	47.2	5.4	40.7	37.2	3.5	13.0	11.1	1.9
1947	57.8	43.4	14.4	44.1	30.8	13.4	15.4	14.4	1.0
1948	59.6	51.1	8.4	43.9	35.5	8.3	17.7	17.6	.1
1949	56.6	60.0	−3.4	39.4	42.0	−2.6	19.5	20.2	−.7
1950	69.4	61.4	8.0	50.4	41.2	9.2	21.3	22.5	−1.2
1951	85.6	79.5	6.1	64.6	58.1	6.5	23.4	23.9	−.4
1952	90.5	94.3	−3.8	67.7	71.4	−3.7	25.4	25.5	−.0
1953	95.0	102.0	−7.0	70.4	77.6	−7.1	27.4	27.3	.1
1954	90.4	97.5	−7.1	64.2	70.3	−6.0	29.0	30.2	−1.1
1955	101.6	98.5	3.1	73.1	68.6	4.4	31.7	32.9	−1.3
1956	110.2	105.0	5.2	78.5	72.5	6.1	35.0	35.9	−.9
1957	116.7	115.8	.9	82.5	80.2	2.3	38.5	39.8	−1.4
1958	115.7	128.3	−12.6	79.3	89.6	−10.3	42.0	44.4	−2.4
1959	130.3	131.9	−1.6	90.6	91.7	−1.1	46.6	47.0	−.4
1960	140.4	137.3	3.1	96.9	93.9	3.0	50.0	49.9	.1
1961	145.9	150.1	−4.3	99.0	102.9	−3.9	54.1	54.5	−.4
1962	157.9	161.6	−3.8	107.2	111.4	−4.2	58.6	58.2	.5
1963	169.8	169.1	.7	115.6	115.3	.3	63.4	62.9	.5
1964	175.6	177.8	−2.3	116.2	119.5	−3.3	69.8	68.8	1.0
1965	190.2	189.6	.5	125.8	125.3	.5	75.5	75.5	−.0
1966	214.4	215.6	−1.3	143.5	145.3	−1.8	85.2	84.7	.5
1967	230.8	245.0	−14.2	152.6	165.8	−13.2	94.1	95.2	−1.1
1968	266.2	272.2	−6.0	176.9	182.9	−6.0	107.9	107.8	.1
1969	300.1	290.2	3.9	199.7	191.3	8.4	120.8	119.3	1.5
1970	306.8	317.4	−10.6	195.4	207.8	−12.4	135.8	134.0	1.8
1971	327.3	346.8	−19.5	202.7	224.8	−22.0	153.6	151.0	2.6
1972	374.0	377.3	−3.4	232.2	249.0	−16.8	179.3	165.8	13.5
1973	419.6	411.7	7.9	263.7	269.3	−5.6	196.4	182.9	13.5
1974	463.1	467.4	−4.3	293.9	305.5	−11.6	213.1	205.9	7.2
1975	480.0	544.9	−64.9	294.9	364.2	−69.4	239.6	235.2	4.5
1976	549.1	587.5	−38.4	340.1	393.7	−53.5	270.1	254.9	15.2
1977	616.6	635.7	−19.1	384.1	430.1	−46.0	300.1	273.2	26.9
1978	694.4	694.8	−.4	441.4	470.7	−29.3	330.3	301.3	28.9
1979	779.8	768.3	11.5	505.0	521.1	−16.1	355.3	327.7	27.6
1980	855.1	889.6	−34.5	553.8	615.1	−61.3	390.0	363.2	26.8
1981	977.2	1,006.9	−29.7	639.5	703.3	−63.8	425.6	391.4	34.1
1982	1,000.8	1,111.6	−110.8	635.3	781.2	−145.9	449.4	414.3	35.1
1983	1,061.3	1,189.9	−128.6	659.9	835.9	−176.0	487.7	440.2	47.5
1984	1,172.9	1,277.9	−105.0	726.0	895.6	−169.6	540.5	475.9	64.6
1985	1,268.5	1,401.4	−132.9	788.6	984.6	−196.0	579.6	516.5	63.1
1986	1,339.3	1,487.1	−147.8	827.4	1,032.0	−204.7	618.8	561.9	56.8
1987 [p]	1,464.2	1,571.4	−107.2	916.5	1,069.1	−152.6	652.3	607.0	45.4
1982: IV	1,008.4	1,175.3	−166.8	633.1	835.7	−202.6	459.8	424.1	35.8
1983: IV	1,095.3	1,208.2	−112.9	675.5	844.7	−169.2	505.8	449.5	56.4
1984: IV	1,200.8	1,322.9	−122.1	742.7	930.2	−187.5	554.5	489.1	65.4
1985: I	1,263.1	1,360.9	−97.8	795.3	958.2	−162.9	563.7	498.6	65.1
II	1,234.7	1,382.8	−148.1	759.0	969.4	−210.3	574.6	512.3	62.2
III	1,280.0	1,413.8	−133.7	794.9	990.8	−195.8	585.3	523.2	62.1
IV	1,296.1	1,448.2	−152.1	805.1	1,020.2	−215.0	594.6	531.7	62.9
1986: I	1,310.3	1,444.3	−134.0	807.6	1,003.7	−196.1	608.1	546.1	62.1
II	1,318.9	1,493.9	−175.0	816.9	1,047.1	−230.2	611.5	556.4	55.1
III	1,349.1	1,493.3	−144.1	832.4	1,036.1	−203.7	626.2	566.7	59.6
IV	1,378.8	1,516.8	−138.1	852.5	1,041.2	−188.7	629.1	578.5	50.6
1987: I	1,409.1	1,538.6	−129.5	879.3	1,049.8	−170.5	632.1	591.1	41.0
II	1,468.2	1,556.8	−88.6	922.9	1,062.1	−139.2	651.3	600.7	50.6
III	1,477.1	1,566.4	−89.3	923.0	1,058.8	−135.8	657.6	611.1	46.5
IV [p]	....	1,623.8	....	....	1,105.8	....	....	625.0	....

Note.—Federal grants-in-aid to State and local governments are reflected in Federal expenditures and State and local receipts. Total government receipts and expenditures have been adjusted to eliminate this duplication.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–80.—*Federal and State and local government receipts and expenditures, national income and product accounts, by major type, 1929–87*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Receipts					Expenditures								Surplus or deficit (−), national income and product accounts	Addendum: Grants-in-aid to State and local governments
									Net interest paid						
	Total	Personal tax and nontax receipts	Corporate profits tax accruals	Indirect business tax and nontax accruals	Contributions for social insurance	Total [1]	Purchases of goods and services	Transfer payments	Total	Interest paid	Less: Interest received by government	Less: Dividends received by government	Subsidies less current surplus of government enterprises		
1929	11.3	2.6	1.4	7.1	0.3	10.3	8.9	1.0	0.7	......	......	......	−0.2	1.0	0.1
1933	9.4	1.4	.5	7.1	.3	10.7	8.3	1.5	1.0	......	......	......	.0	−1.4	.5
1939	15.4	2.4	1.4	9.4	2.2	17.6	13.6	2.6	1.1	......	......	......	.4	−2.2	1.0
1940	17.8	2.6	2.8	10.1	2.4	18.5	14.2	2.7	1.2	......	......	......	.4	−.7	.9
1941	25.0	3.3	7.6	11.3	2.8	28.8	25.0	2.6	1.2	......	......	......	.1	−3.8	.8
1942	32.7	5.9	11.4	11.8	3.5	64.1	59.9	2.7	1.4	......	......	......	.1	−31.4	.9
1943	49.2	17.8	14.1	12.8	4.6	93.4	88.9	2.4	1.9	......	......	......	.1	−44.2	.9
1944	51.2	18.9	12.9	14.2	5.2	103.1	97.1	3.0	2.4	......	......	......	.6	−51.8	.9
1945	53.4	20.8	10.7	15.5	6.3	92.9	83.0	6.0	3.2	......	......	......	.7	−39.5	.9
1946	52.6	18.7	9.1	17.1	7.7	47.2	29.1	13.1	4.1	......	......	......	.9	5.4	1.1
1947	57.8	21.4	11.3	18.4	6.7	43.4	26.4	13.1	4.2	......	......	......	−.2	14.4	1.7
1948	59.6	21.0	12.4	20.1	6.0	51.1	32.6	14.5	4.2	......	......	......	−.1	8.4	2.0
1949	56.6	18.5	10.2	21.3	6.6	60.0	39.0	16.9	4.3	......	......	......	−.3	−3.4	2.2
1950	69.4	20.6	17.9	23.4	7.4	61.4	38.8	18.0	4.4	......	......	......	.1	8.0	2.3
1951	85.6	28.9	22.6	25.3	8.8	79.5	60.4	14.8	4.5	......	......	......	−.1	6.1	2.5
1952	90.5	34.0	19.4	27.7	9.3	94.3	75.8	14.3	4.5	......	......	......	−.3	−3.8	2.6
1953	95.0	35.5	20.3	29.7	9.6	102.0	82.8	15.1	4.6	......	......	......	−.5	−7.0	2.8
1954	90.4	32.5	17.6	29.6	10.6	97.5	76.0	17.1	4.7	......	......	......	−.3	−7.1	2.9
1955	101.6	35.4	22.0	32.2	12.0	98.5	75.3	18.5	4.7	......	......	......	.0	3.1	3.1
1956	110.2	39.7	22.0	35.0	13.5	105.0	79.7	19.4	5.2	......	......	......	.7	5.2	3.3
1957	116.7	42.4	21.4	37.4	15.5	115.8	87.3	22.2	5.6	......	......	......	.7	.9	4.2
1958	115.7	42.2	19.0	38.6	15.9	128.3	95.4	26.5	5.4	......	......	......	1.1	−12.6	5.6
1959	130.3	46.1	23.6	41.7	18.8	131.9	97.9	27.6	6.3	......	......	......	.1	−1.6	6.8
1960	140.4	50.5	22.7	45.3	21.9	137.3	100.6	29.4	6.9	10.1	3.3	......	.4	3.1	6.5
1961	145.9	52.2	22.8	48.0	22.9	150.1	108.4	33.7	6.4	9.9	3.5	......	1.7	−4.3	7.2
1962	157.9	57.0	24.0	51.5	25.4	161.6	118.2	34.8	6.9	10.8	3.9	......	1.8	−3.8	8.0
1963	169.8	60.5	26.2	54.6	28.5	169.1	123.8	36.8	7.4	11.6	4.2	......	1.1	.7	9.1
1964	175.6	58.8	28.0	58.7	30.1	177.8	130.0	38.3	7.9	12.5	4.6	......	1.7	−2.3	10.4
1965	190.2	65.2	30.9	62.5	31.6	189.6	138.6	41.3	8.1	13.2	5.1	......	1.6	.5	11.1
1966	214.4	74.9	33.7	65.2	40.6	215.6	158.6	46.0	8.5	14.5	6.0	......	2.5	−1.3	14.4
1967	230.8	82.4	32.7	70.1	45.5	245.0	179.7	54.7	8.9	15.7	6.8	......	1.6	−14.2	15.9
1968	266.2	97.7	39.4	78.7	50.4	272.2	197.7	62.9	10.3	18.1	7.7	0.1	1.4	−6.0	18.6
1969	300.1	116.3	39.7	86.3	57.9	290.2	207.3	69.7	11.5	19.8	8.3	2	1.9	9.9	20.3
1970	306.8	116.2	34.4	94.0	62.2	317.4	218.2	84.1	12.4	22.3	9.9	.2	2.9	−10.6	24.4
1971	327.3	117.3	37.7	103.4	68.9	346.8	232.4	99.8	12.5	23.1	10.6	.3	2.6	−19.5	29.0
1972	374.0	142.0	41.9	111.1	79.0	377.3	250.0	111.3	12.9	24.8	11.9	.3	3.7	−3.4	37.5
1973	419.6	152.0	49.3	120.8	97.6	411.7	266.5	127.0	15.2	29.6	14.3	.5	3.5	7.9	40.6
1974	463.1	171.8	51.8	129.0	110.5	467.4	299.1	150.9	16.5	33.6	17.1	.9	1.2	−4.3	43.9
1975	480.0	170.6	50.9	140.0	118.5	544.9	335.0	189.6	18.8	37.7	18.9	.9	2.4	−64.9	54.6
1976	549.1	198.7	64.2	151.7	134.5	587.5	356.9	207.2	23.2	43.6	20.4	.9	1.0	−38.4	61.1
1977	616.6	228.1	73.0	165.7	149.8	635.7	387.3	221.6	25.1	47.9	22.8	1.3	3.0	−19.1	67.5
1978	694.4	261.1	83.5	178.1	171.7	694.8	425.2	239.5	28.2	56.5	28.3	1.7	3.9	−.4	77.3
1979	779.8	304.7	88.0	189.4	197.8	768.3	467.8	268.0	30.8	68.2	37.5	2.0	3.5	11.5	80.5
1980	855.1	340.5	84.8	213.3	216.5	889.6	530.3	319.2	36.3	83.2	46.9	1.9	5.7	−34.5	88.7
1981	977.2	393.3	81.1	251.5	251.2	1,006.9	588.1	362.2	52.2	109.1	56.9	2.3	6.7	−29.7	87.9
1982	1,000.8	409.3	63.1	258.8	269.6	1,111.6	641.7	404.0	60.1	128.3	68.1	2.9	8.7	−110.8	83.9
1983	1,061.3	410.5	77.2	282.6	291.0	1,189.9	675.0	435.1	68.1	145.1	77.1	2.8	14.1	−128.6	86.2
1984	1,172.9	440.2	93.9	313.9	324.9	1,277.9	735.9	448.7	87.2	173.5	86.3	3.5	9.9	−105.0	93.6
1985	1,268.5	485.9	96.7	333.2	352.7	1,401.4	818.6	481.6	99.7	194.5	94.7	5.0	6.3	−132.9	99.7
1986	1,339.3	512.2	105.0	347.7	374.3	1,487.1	869.7	510.0	104.2	205.8	101.7	5.6	8.7	−147.8	106.9
1987 ᵖ	1,464.2	564.7	137.5	367.6	394.4	1,571.4	923.8	531.2	109.7	214.6	104.9	6.3	13.1	−107.2	104.7
1982: IV	1,008.4	411.1	59.8	264.5	273.0	1,175.3	671.8	429.7	61.4	133.2	71.8	3.1	15.4	−166.8	84.5
1983: IV	1,095.3	413.9	88.1	294.1	299.2	1,208.2	676.1	441.1	74.2	154.7	80.5	2.9	19.6	−112.9	86.0
1984: IV	1,200.8	459.7	87.0	322.7	331.5	1,322.9	764.5	458.5	96.1	185.3	89.2	4.0	8.4	−122.1	96.3
1985: I	1,263.1	497.0	94.0	325.9	346.2	1,360.9	784.1	472.4	97.9	188.9	91.0	4.5	11.2	−97.8	95.9
II	1,234.7	455.9	93.2	334.9	350.6	1,382.8	800.5	477.3	100.1	193.2	93.1	5.0	8.8	−148.1	98.9
III	1,280.0	491.0	100.5	334.4	354.1	1,413.8	832.8	486.2	99.0	195.6	96.7	5.2	1.1	−133.7	100.2
IV	1,296.1	499.7	99.1	337.3	360.0	1,448.2	857.0	490.4	102.0	200.2	98.2	5.4	4.2	−152.1	103.7
1986: I	1,310.3	497.4	98.1	345.6	369.3	1,444.3	846.9	497.0	103.7	204.2	100.5	5.5	2.3	−134.0	105.4
II	1,318.9	504.2	102.1	340.7	371.9	1,493.9	867.2	507.4	104.5	205.6	101.1	5.5	20.4	−175.0	109.6
III	1,349.1	515.3	106.1	352.8	374.9	1,493.3	878.5	517.1	102.6	206.2	103.6	5.6	.7	−144.1	109.5
IV	1,378.8	532.0	113.9	351.9	381.0	1,516.8	886.3	518.7	105.9	207.4	101.5	5.7	11.6	−138.1	102.8
1987: I	1,409.1	536.1	128.0	358.3	386.7	1,538.6	896.2	521.6	107.3	209.7	102.3	5.9	19.3	−129.5	102.2
II	1,468.2	578.0	134.2	365.2	390.9	1,556.8	917.1	528.9	107.1	211.0	103.9	6.2	9.9	−88.6	106.0
III	1,477.1	565.7	143.0	371.8	396.6	1,566.4	929.0	532.2	109.7	215.6	105.9	6.5	2.3	−89.3	103.5
IV ᵖ	......	578.9	......	375.1	403.6	1,623.8	952.8	541.9	114.6	221.9	107.3	6.8	21.0	......	107.0

---

[1] Includes an item for the difference between wage accruals and disbursements, not shown separately.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B-81.—*Federal Government receipts and expenditures, national income and product accounts, 1966–89*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Receipts					Expenditures								Surplus or deficit (−), national income and product accounts
	Total	Personal tax and nontax receipts	Corporate profits tax accruals	Indirect business tax and nontax accruals	Contributions for social insurance	Total [1]	Purchases of goods and services		Transfer payments		Grants-in-aid to State and local governments	Net interest paid	Subsidies less current surplus of government enterprises	
							Total	National defense	To persons	To foreigners				
Fiscal: [2]														
1966	134.0	57.5	30.8	15.4	30.2	134.3	73.9	55.7	31.8	2.4	12.7	8.7	4.8	−0.3
1967	148.1	64.4	30.3	15.7	37.7	156.7	87.6	68.8	37.2	2.3	14.8	9.6	5.2	−8.6
1968	162.1	71.4	33.1	17.0	40.6	174.4	97.0	77.0	42.9	2.2	17.8	10.4	4.1	−12.3
1969	192.5	90.2	36.8	18.6	46.9	187.3	100.3	78.5	48.9	2.3	19.2	12.0	4.7	5.2
1970	198.0	94.0	32.9	19.1	52.0	198.7	99.8	78.2	55.3	2.2	22.6	13.5	5.5	−.7
1971	196.2	87.9	31.9	20.0	56.5	216.8	98.3	75.7	68.1	2.5	26.8	14.1	7.0	−20.5
1972	217.9	100.5	34.2	19.8	63.4	237.1	104.4	76.2	76.5	3.0	32.6	14.0	6.5	−19.2
1973	245.3	107.5	40.9	20.6	76.3	260.4	105.3	77.1	87.6	2.8	40.4	15.7	9.1	−15.2
1974	277.2	122.7	43.4	21.3	89.8	283.9	109.3	78.8	102.3	3.2	41.6	19.6	7.7	−6.8
1975	290.5	127.5	42.1	22.1	98.8	335.7	123.9	86.3	131.9	3.7	48.4	21.7	5.9	−45.3
1976	322.6	137.1	52.1	24.2	109.1	378.9	132.2	91.5	154.3	3.7	57.5	25.1	6.2	−56.3
1977	374.7	165.9	59.0	24.5	125.4	419.6	146.8	99.2	167.1	4.1	66.3	28.5	6.9	−44.8
1978	424.3	186.5	67.8	27.1	142.9	459.9	158.6	106.3	179.3	4.4	74.7	33.5	9.7	−35.6
1979	491.2	222.9	75.7	29.0	163.6	506.4	173.1	117.7	198.5	5.1	79.1	40.7	9.9	−15.2
1980	538.6	250.7	70.2	35.3	182.3	589.0	199.9	137.2	235.4	5.8	86.7	50.8	10.4	−50.4
1981	623.8	289.6	69.4	53.4	211.4	682.4	231.8	160.7	274.6	6.7	90.1	66.7	12.5	−58.5
1982	643.3	310.0	52.1	50.0	231.1	755.9	264.4	187.3	305.6	7.2	83.4	82.2	13.0	−112.6
1983	645.7	292.5	55.7	50.2	247.3	832.4	287.4	210.4	339.8	7.7	85.7	90.6	20.9	−186.7
1984	711.9	302.5	75.3	55.0	279.2	873.0	297.1	228.5	342.2	10.0	90.7	109.7	23.4	−161.1
1985	776.4	340.5	74.3	56.0	305.6	961.0	340.4	253.1	360.6	13.4	97.8	128.0	20.6	−184.5
1986	814.2	358.0	80.3	51.7	324.1	1,027.8	368.4	275.3	380.5	14.3	107.4	134.3	22.9	−213.6
1987	905.6	401.9	104.0	54.1	345.6	1,055.1	374.9	290.5	398.7	11.4	103.1	139.6	27.5	−149.5
1988 [3]	973.8	406.3	129.7	57.6	380.2	1,098.1	375.3	289.1	421.3	12.5	110.7	147.8	30.4	−124.3
1989 [3]	1,029.1	421.2	138.2	60.1	409.6	1,145.9	396.4	295.4	447.4	12.0	113.3	152.7	24.1	−116.8
Calendar:														
1966	143.5	61.7	31.4	15.5	34.9	145.3	80.4	62.0	33.5	2.4	14.4	9.2	5.5	−1.8
1967	152.6	67.5	30.0	16.2	38.9	165.8	92.7	73.4	40.2	2.4	15.9	9.8	4.7	−13.2
1968	176.9	79.7	36.1	17.9	43.2	182.9	100.1	79.1	46.2	2.3	18.6	11.3	4.5	−6.0
1969	199.7	95.1	36.1	18.9	49.6	191.3	100.0	78.9	50.8	2.2	20.3	12.7	5.2	8.4
1970	195.4	92.6	30.6	19.2	52.9	207.8	98.8	76.8	61.6	2.3	24.4	14.1	6.5	−12.4
1971	202.7	90.3	33.5	20.3	58.7	224.8	99.8	74.1	73.0	2.7	29.0	13.8	6.3	−22.0
1972	232.2	108.2	36.6	19.9	67.5	249.0	105.8	77.4	80.9	2.9	37.5	14.4	7.9	−16.8
1973	263.7	114.7	43.3	21.1	84.6	269.3	106.4	77.5	93.7	2.9	40.6	18.0	7.8	−5.6
1974	293.9	131.3	45.1	21.6	95.9	305.5	116.2	82.6	115.0	3.6	43.9	20.7	5.6	−11.6
1975	294.9	125.9	43.6	23.8	101.6	364.2	129.2	89.6	146.8	4.0	54.6	23.0	6.9	−69.4
1976	340.1	147.3	54.6	23.3	115.0	393.7	136.3	93.4	159.3	4.4	61.1	26.8	5.8	−53.5
1977	384.1	169.8	61.6	25.0	127.7	430.1	151.1	100.9	170.1	4.2	67.5	29.1	8.2	−46.0
1978	441.4	194.9	71.4	28.0	147.0	470.7	161.8	108.9	182.4	4.7	77.3	35.2	9.5	−29.3
1979	505.0	231.0	74.4	29.3	170.3	521.1	178.0	121.9	205.6	5.2	80.5	42.5	9.2	−16.1
1980	553.8	257.9	70.3	38.8	186.8	615.1	208.1	142.7	247.0	6.5	88.7	53.3	11.5	−61.3
1981	639.5	298.9	65.7	56.2	218.8	703.3	242.2	167.5	282.1	6.5	87.9	72.4	12.3	−63.8
1982	635.3	304.5	49.0	48.1	233.7	781.2	272.7	193.8	316.3	7.8	83.9	84.6	16.0	−145.9
1983	659.9	294.5	61.3	51.6	252.5	835.9	283.5	214.4	340.1	8.5	86.2	94.3	22.9	−176.0
1984	726.0	310.3	75.2	55.7	284.7	895.6	310.5	234.3	344.2	10.7	93.6	115.6	21.2	−169.6
1985	788.6	346.6	76.1	55.2	310.6	984.6	353.9	259.3	366.7	13.4	99.7	130.2	20.5	−196.0
1986	827.4	363.0	83.7	50.9	329.8	1,032.0	366.2	277.8	385.9	14.0	106.9	135.7	23.3	−204.7
1987 ᵖ	916.5	403.8	110.3	54.0	348.4	1,069.1	380.6	295.2	401.8	11.4	104.7	142.6	28.1	−152.6
1982: IV	633.1	303.0	46.4	47.6	236.1	835.7	293.2	205.4	337.9	9.5	84.5	87.2	23.4	−202.6
1983: IV	675.5	291.9	70.2	53.6	259.8	844.7	276.1	221.5	340.3	12.2	86.0	101.0	29.1	−169.2
1984: IV	742.7	326.0	69.7	56.2	290.7	930.2	326.0	244.1	346.6	15.5	96.3	125.3	21.0	−187.5
1985: I	795.3	361.2	74.2	55.0	304.9	958.2	336.3	250.2	362.8	11.1	95.9	127.7	24.5	−162.9
II	759.0	317.5	73.5	59.2	308.8	969.4	339.4	253.7	364.5	12.5	98.9	130.4	22.6	−210.3
III	794.9	351.0	79.1	53.1	311.7	990.8	361.9	265.1	369.1	14.5	100.2	129.7	15.3	−195.8
IV	805.1	356.7	77.8	53.7	316.9	1,020.2	378.0	268.2	370.3	15.5	103.7	133.0	19.7	−215.0
1986: I	807.6	352.8	78.7	50.4	325.8	1,003.7	356.7	266.6	379.5	10.4	105.4	134.9	16.8	−196.1
II	816.9	357.6	81.3	49.9	328.1	1,047.1	368.4	278.2	383.1	15.1	109.6	135.9	34.9	−230.2
III	832.4	365.2	84.3	52.1	330.7	1,036.1	371.2	287.6	390.1	15.8	109.5	134.2	15.3	−203.7
IV	852.5	376.4	90.5	51.1	334.5	1,041.2	368.6	279.0	391.0	14.7	102.8	137.8	26.3	−188.7
1987: I	879.3	381.5	103.0	53.3	341.5	1,049.8	366.9	287.5	396.0	10.7	102.2	139.5	34.3	−170.5
II	922.9	415.6	107.9	54.2	345.2	1,062.1	379.6	294.5	401.5	10.5	106.0	139.8	24.8	−139.2
III	923.0	404.3	114.5	53.9	350.3	1,058.8	382.1	299.0	403.7	9.8	103.5	142.9	17.2	−135.8
IV ᵖ	....	413.8	....	54.6	356.6	1,105.8	393.7	300.0	406.2	14.4	107.0	148.3	35.9	....

---

[1] Includes an item for the difference between wage accruals and disbursements, not shown separately.

[2] Through fiscal year 1976, the fiscal year was on a July 1–June 30 basis; beginning October 1976 (fiscal year 1977), the fiscal year is on an October 1–September 30 basis. The 3-month period from July 1, 1976 through September 30, 1976 is a separate fiscal period known as the transition quarter.

[3] Estimates.

Sources: Department of Commerce (Bureau of Economic Analysis) and Office of Management and Budget.

TABLE B–82.—*State and local government receipts and expenditures, national income and product accounts, 1946–87*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Receipts						Expenditures					Surplus or deficit (−), national income and product accounts
	Total	Personal tax and nontax receipts	Corporate profits tax accruals	Indirect business tax and nontax accruals	Contributions for social insurance	Federal grants-in-aid	Total [1]	Purchases of goods and services	Transfer payments to persons	Net interest paid less dividends received	Subsidies less current surplus of government enterprises	
1946	13.0	1.5	0.5	9.3	0.6	1.1	11.1	9.9	1.7	0.2	−0.7	1.9
1947	15.4	1.7	.6	10.7	.7	1.7	14.4	12.8	2.3	.1	−.8	1.0
1948	17.7	2.1	.7	12.2	.8	2.0	17.6	15.3	3.0	.1	−.8	.1
1949	19.5	2.4	.6	13.3	.9	2.2	20.2	18.0	3.0	.1	−.9	−.7
1950	21.3	2.5	.8	14.6	1.1	2.3	22.5	19.8	3.6	.1	−.9	−1.2
1951	23.4	2.8	.9	15.9	1.4	2.5	23.9	21.8	3.1	.0	−1.0	−.4
1952	25.4	3.0	.8	17.4	1.6	2.6	25.5	23.1	3.5	.0	−1.1	.0
1953	27.4	3.2	.8	18.8	1.7	2.8	27.3	24.8	3.6	.0	−1.2	.1
1954	29.0	3.5	.8	19.9	2.0	2.9	30.2	27.7	3.8	.1	−1.3	−1.1
1955	31.7	3.9	1.0	21.6	2.1	3.1	32.9	30.3	4.0	.1	−1.5	−1.3
1956	35.0	4.5	1.0	23.8	2.3	3.3	35.9	33.3	4.2	.1	−1.6	−.9
1957	38.5	5.0	1.0	25.7	2.6	4.2	39.8	36.9	4.6	.1	−1.7	−1.4
1958	42.0	5.4	1.0	27.2	2.8	5.6	44.4	40.8	5.1	.1	−1.7	−2.4
1959	46.6	6.2	1.2	29.3	3.1	6.8	47.0	43.3	5.6	.1	−2.0	−.4
1960	50.0	6.8	1.2	32.0	3.4	6.5	49.9	46.1	5.9	.1	−2.2	.1
1961	54.1	7.5	1.3	34.4	3.7	7.2	54.5	50.2	6.5	.1	−2.3	−.4
1962	58.6	8.4	1.5	37.0	3.9	8.0	58.2	53.5	7.0	.2	−2.5	.5
1963	63.4	9.0	1.7	39.4	4.2	9.1	62.9	58.1	7.5	.1	−2.8	.5
1964	69.8	10.2	1.8	42.6	4.7	10.4	68.8	63.5	8.2	−.1	−2.8	1.0
1965	75.5	11.3	2.0	46.1	5.0	11.1	75.5	69.9	8.8	−.3	−3.0	.0
1966	85.2	13.2	2.2	49.7	5.7	14.4	84.7	78.2	10.1	−.6	−3.0	.5
1967	94.1	15.0	2.6	53.9	6.7	15.9	95.2	87.0	12.1	−.9	−3.1	−1.1
1968	107.9	18.0	3.3	60.8	7.2	18.6	107.8	97.6	14.5	−1.1	−3.2	.1
1969	120.8	21.1	3.6	67.4	8.3	20.3	119.3	107.2	16.7	−1.3	−3.3	1.5
1970	135.8	23.6	3.7	74.8	9.2	24.4	134.0	119.4	20.1	−2.0	−3.6	1.8
1971	153.6	27.0	4.3	83.1	10.2	29.0	151.0	132.5	24.0	−1.6	−3.7	2.6
1972	179.3	33.8	5.3	91.2	11.5	37.5	165.8	144.2	27.5	−1.8	−4.2	13.5
1973	196.4	37.3	6.0	99.6	13.0	40.6	182.9	160.1	30.4	−3.3	−4.3	13.5
1974	213.1	40.5	6.7	107.4	14.6	43.9	205.9	182.9	32.3	−5.0	−4.4	7.2
1975	239.6	44.7	7.3	116.2	16.8	54.6	235.2	205.9	38.9	−5.1	−4.5	4.5
1976	270.1	51.5	9.6	128.4	19.5	61.1	254.9	220.6	43.6	−4.5	−4.8	15.2
1977	300.1	58.3	11.4	140.7	22.1	67.5	273.2	236.2	47.4	−5.3	−5.1	26.9
1978	330.3	66.2	12.1	150.0	24.7	77.3	301.3	263.4	52.4	−8.7	−5.6	28.9
1979	355.3	73.7	13.6	160.1	27.4	80.5	327.7	289.9	57.2	−13.8	−5.7	27.6
1980	390.0	82.6	14.5	174.5	29.7	88.7	363.2	322.2	65.7	−18.9	−5.8	26.8
1981	425.6	94.5	15.4	195.3	32.5	87.9	391.4	345.9	73.6	−22.4	−5.6	34.1
1982	449.4	104.9	14.0	210.8	35.8	83.9	414.3	369.0	79.9	−27.4	−7.3	35.1
1983	487.7	116.1	15.9	231.0	38.5	86.2	440.2	391.5	86.5	−29.0	−8.8	47.5
1984	540.5	129.8	18.7	258.2	40.2	93.6	475.9	425.3	93.7	−31.9	−11.3	64.6
1985	579.6	139.3	20.6	277.9	42.1	99.7	516.5	464.7	101.5	−35.5	−14.2	63.1
1986	618.8	149.3	21.3	296.8	44.5	106.9	561.9	503.5	110.1	−37.1	−14.6	56.8
1987 *p*	652.3	160.9	27.2	313.6	46.1	104.7	607.0	543.2	118.0	−39.3	−15.0	45.4
1982: IV	459.8	108.1	13.4	216.9	36.9	84.5	424.1	378.7	82.3	−28.9	−8.0	35.8
1983: IV	505.8	122.0	17.9	240.5	39.4	86.0	449.5	400.0	88.7	−29.7	−9.4	56.4
1984: IV	554.5	133.6	17.3	266.5	40.7	96.3	489.1	438.5	96.4	−33.2	−12.6	65.4
1985: I	563.7	135.8	19.9	270.9	41.2	95.9	498.6	447.8	98.4	−34.3	−13.3	65.1
II	574.6	138.4	19.7	275.7	41.8	98.9	512.3	461.1	100.3	−35.2	−13.9	62.2
III	585.3	139.9	21.4	281.4	42.4	100.2	523.2	470.9	102.5	−36.0	−14.2	62.1
IV	594.6	143.0	21.2	283.7	43.0	103.7	531.7	479.0	104.6	−36.4	−15.4	62.9
1986: I	608.1	144.7	19.4	295.2	43.5	105.4	546.1	490.2	107.1	−36.7	−14.5	62.1
II	611.5	146.6	20.7	290.8	43.8	109.6	556.4	498.8	109.1	−37.0	−14.5	55.1
III	626.2	150.1	21.8	300.6	44.2	109.5	566.7	507.3	111.2	−37.2	−14.6	59.6
IV	629.1	155.6	23.4	300.7	46.5	102.8	578.5	517.7	113.0	−37.6	−14.7	50.6
1987: I	632.1	154.6	25.0	305.0	45.2	102.2	591.1	529.3	114.9	−38.1	−15.0	41.0
II	651.3	162.3	26.4	311.0	45.7	106.0	600.7	537.6	116.9	−38.9	−14.9	50.6
III	657.6	161.4	28.4	317.9	46.3	103.5	611.1	546.9	118.8	−39.6	−15.0	46.5
IV *p*	....	165.1	....	320.5	47.0	107.0	625.0	559.1	121.3	−40.5	−15.0	....

---

[1] Includes an item for the difference between wage accruals and disbursements, not shown separately.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–83.—*State and local government revenues and expenditures, selected fiscal years, 1927–86*

[Millions of dollars]

Fiscal year[1]	General revenues by source[2]							General expenditures by function[2]				
	Total	Property taxes	Sales and gross receipts taxes	Individual income taxes	Corporation net income taxes	Revenue from Federal Government	All other[3]	Total	Education	Highways	Public welfare	All other[4]
1927	7,271	4,730	470	70	92	116	1,793	7,210	2,235	1,809	151	3,015
1932	7,267	4,487	752	74	79	232	1,643	7,765	2,311	1,741	444	3,269
1934	7,678	4,076	1,008	80	49	1,016	1,449	7,181	1,831	1,509	889	2,952
1936	8,395	4,093	1,484	153	113	948	1,604	7,644	2,177	1,425	827	3,215
1938	9,228	4,440	1,794	218	165	800	1,811	8,757	2,491	1,650	1,069	3,547
1940	9,609	4,430	1,982	224	156	945	1,872	9,229	2,638	1,573	1,156	3,862
1942	10,418	4,537	2,351	276	272	858	2,123	9,190	2,586	1,490	1,225	3,889
1944	10,908	4,604	2,289	342	451	954	2,269	8,863	2,793	1,200	1,133	3,737
1946	12,356	4,986	2,986	422	447	855	2,661	11,028	3,356	1,672	1,409	4,591
1948	17,250	6,126	4,442	543	592	1,861	3,685	17,684	5,379	3,036	2,099	7,170
1950	20,911	7,349	5,154	788	593	2,486	4,541	22,787	7,177	3,803	2,940	8,867
1952	25,181	8,652	6,357	998	846	2,566	5,763	26,098	8,318	4,650	2,788	10,342
1953	27,307	9,375	6,927	1,065	817	2,870	6,252	27,910	9,390	4,987	2,914	10,619
1954	29,012	9,967	7,276	1,127	778	2,966	6,897	30,701	10,557	5,527	3,060	11,557
1955	31,073	10,735	7,643	1,237	744	3,131	7,584	33,724	11,907	6,452	3,168	12,197
1956	34,667	11,749	8,691	1,538	890	3,335	8,465	36,711	13,220	6,953	3,139	13,399
1957	38,164	12,864	9,467	1,754	984	3,843	9,252	40,375	14,134	7,816	3,485	14,940
1958	41,219	14,047	9,829	1,759	1,018	4,865	9,699	44,851	15,919	8,567	3,818	16,547
1959	45,306	14,983	10,437	1,994	1,001	6,377	10,516	48,887	17,283	9,592	4,136	17,876
1960	50,505	16,405	11,849	2,463	1,180	6,974	11,634	51,876	18,719	9,428	4,404	19,325
1961	54,037	18,002	12,463	2,613	1,266	7,131	12,563	56,201	20,574	9,844	4,720	21,063
1962	58,252	19,054	13,494	3,037	1,308	7,871	13,489	60,206	22,216	10,357	5,084	22,549
1963	62,890	20,089	14,456	3,269	1,505	8,722	14,850	64,816	23,776	11,136	5,481	24,423
1962–63	62,269	19,833	14,446	3,267	1,505	8,663	14,556	63,977	23,729	11,150	5,420	23,678
1963–64	68,443	21,241	15,762	3,791	1,695	10,002	15,951	69,302	26,286	11,664	5,766	25,586
1964–65	74,000	22,583	17,118	4,090	1,929	11,029	17,250	74,678	28,563	12,221	6,315	27,579
1965–66	83,036	24,670	19,085	4,760	2,038	13,214	19,269	82,843	33,287	12,770	6,757	30,029
1966–67	91,197	26,047	20,530	5,825	2,227	15,370	21,197	93,350	37,919	13,932	8,218	33,281
1967–68	101,264	27,747	22,911	7,308	2,518	17,181	23,598	102,411	41,158	14,481	9,857	36,915
1968–69	114,550	30,673	26,519	8,908	3,180	19,153	26,118	116,728	47,238	15,417	12,110	41,963
1969–70	130,756	34,054	30,322	10,812	3,738	21,857	29,971	131,332	52,718	16,427	14,679	47,508
1970–71	144,927	37,852	33,233	11,900	3,424	26,146	32,374	150,674	59,413	18,095	18,226	54,940
1971–72	167,541	42,877	37,518	15,227	4,416	31,342	36,162	168,550	65,814	19,021	21,117	62,597
1972–73	190,214	45,283	42,047	17,994	5,425	39,256	40,210	181,357	69,714	18,615	23,582	69,446
1973–74	207,670	47,705	46,098	19,491	6,015	41,820	46,541	198,959	75,833	19,946	25,085	78,096
1974–75	228,171	51,491	49,815	21,454	6,642	47,034	51,735	230,721	87,858	22,528	28,155	92,180
1975–76	256,176	57,001	54,547	24,575	7,273	55,589	57,191	256,731	97,216	23,907	32,604	103,004
1976–77	285,157	62,527	60,641	29,246	9,174	62,444	61,124	274,215	102,780	23,058	35,906	112,472
1977–78	315,960	66,422	67,596	33,176	10,738	69,592	68,436	296,983	110,758	24,609	39,140	122,476
1978–79	343,278	64,944	74,247	36,932	12,128	75,164	79,864	327,517	119,448	28,440	41,898	137,731
1979–80	382,322	68,499	79,927	42,080	13,321	83,029	95,466	369,086	133,211	33,311	47,288	155,277
1980–81	423,404	74,969	85,971	46,426	14,143	90,294	111,599	407,449	145,784	34,603	54,121	172,941
1981–82	457,654	82,067	93,613	50,738	15,028	87,282	128,926	436,896	154,282	34,520	57,996	190,098
1982–83	486,753	89,105	100,247	55,129	14,258	90,007	138,008	466,764	163,876	36,655	60,906	205,327
1983–84	542,730	96,457	114,097	64,529	17,141	96,935	153,570	505,097	176,108	39,419	66,414	223,156
1984–85	598,121	103,757	126,376	70,361	19,152	106,158	172,317	553,997	192,686	44,989	71,479	244,843
1985–86	641,407	111,711	134,971	74,417	19,951	113,099	187,258	605,789	210,819	49,368	75,958	269,644

[1] Fiscal years not the same for all governments. See Note.

[2] Excludes revenues or expenditures of publicly owned utilities and liquor stores, and of insurance-trust activities. Intergovernmental receipts and payments between State and local governments are also excluded.

[3] Includes other taxes and charges and miscellaneous revenues.

[4] Includes expenditures for libraries, hospitals, health, employment security administration, veterans' services, air transportation, water transport and terminals, parking facilities, and transit subsidies, police protection, fire protection, correction, protective inspection and regulation, sewerage, natural resources, parks and recreation, housing and community development, sanitation other than sewerage, financial administration, judicial and legal, general public buildings, other governmental administration, interest on general debt, and general expenditures, n.e.c.

Note.—Data for fiscal years listed from 1962–63 to 1985–86 are the aggregations of data for government fiscal years which ended in the 12-month period from July 1 to June 30 of those years. Data for 1963 and earlier years include data for government fiscal years ending during that particular calendar year.

Data are not available for intervening years.

Source: Department of Commerce, Bureau of the Census.

TABLE B-84.—*Interest-bearing public debt securities by kind of obligation, 1967–87*

[Millions of dollars]

End of year or month	Total [1] interest-bearing public debt securities	Marketable: Total [1]	Marketable: Treasury bills	Marketable: Treasury notes	Marketable: Treasury bonds	Nonmarketable: Total	Nonmarketable: U.S. savings bonds	Nonmarketable: Foreign government and pubiic series [2]	Nonmarketable: Government account series	Nonmarketable: Other [3]
Fiscal year:										
1967	322,286	[4] 210,672	58,535	49,108	97,418	111,614	51,213	1,514	56,155	2,731
1968	344,401	226,592	64,440	71,073	91,079	117,808	51,712	3,741	59,526	2,828
1969	351,729	226,107	68,356	78,946	78,805	125,623	51,711	4,070	66,790	3,051
1970	369,026	232,599	76,154	93,489	62,956	136,426	51,281	4,755	76,323	4,068
1971	396,289	245,473	86,677	104,807	53,989	150,816	53,003	9,270	82,784	5,759
1972	425,360	257,202	94,648	113,419	49,135	168,158	55,921	18,985	89,598	3,654
1973	456,353	262,971	100,061	117,840	45,071	193,382	59,418	28,524	101,738	3,701
1974	473,238	266,575	105,019	128,419	33,137	206,663	61,921	25,011	115,442	4,289
1975	532,122	315,606	128,569	150,257	36,779	216,516	65,482	23,216	124,173	3,644
1976	619,254	392,581	161,198	191,758	39,626	226,673	69,733	21,500	130,557	4,883
1977	697,629	443,508	156,091	241,692	45,724	254,121	75,411	21,799	140,113	16,797
1978	766,971	485,155	160,936	267,865	56,355	281,816	79,798	21,680	153,271	27,067
1979	819,007	506,693	161,378	274,242	71,073	312,314	80,440	28,115	176,360	27,400
1980	906,402	594,506	199,832	310,903	83,772	311,896	72,727	25,158	189,848	24,164
1981	996,495	683,209	223,388	363,643	96,178	313,286	68,017	20,499	201,052	23,718
1982	1,140,883	824,422	277,900	442,890	103,631	316,461	67,274	14,641	210,462	24,085
1983	1,375,751	1,024,000	340,733	557,525	125,742	351,751	70,024	11,450	234,684	35,593
1984	1,559,570	1,176,556	356,798	661,687	158,070	383,015	72,832	8,806	259,534	41,843
1985	1,821,010	1,360,179	384,220	776,449	199,510	460,831	77,011	6,638	313,928	63,255
1986	2,122,684	[1] 1,564,329	410,730	896,884	241,716	558,355	85,551	4,128	365,872	102,804
1987	2,347,750	[1] 1,675,980	378,263	1,005,127	277,590	671,769	97,004	4,350	440,658	129,758
1986: Jan	1,960,129	[1] 1,449,859	399,563	820,299	215,803	510,270	78,567	7,543	336,203	87,957
Feb	1,976,744	[1] 1,464,094	397,505	829,375	223,045	512,650	79,185	7,087	338,988	87,391
Mar	1,984,224	[1] 1,472,836	393,172	842,473	223,022	511,388	79,807	6,726	335,956	88,899
Apr	2,005,889	[1] 1,481,953	393,714	851,084	222,986	523,936	80,534	5,737	343,156	94,509
May	2,019,773	[1] 1,487,226	394,880	845,884	232,294	532,547	81,509	5,253	348,672	97,112
June	2,056,726	1,498,229	396,650	869,302	232,278	558,497	82,278	5,260	372,305	98,653
July	2,071,976	1,510,700	400,727	877,717	232,256	561,276	83,052	4,676	372,264	101,284
Aug	2,081,961	[1] 1,531,835	403,628	872,796	241,742	550,126	84,322	4,470	358,380	102,953
Sept	2,122,684	[1] 1,564,329	410,730	896,884	241,716	558,355	85,551	4,128	365,872	102,804
Oct	2,136,596	[1] 1,567,492	412,166	898,631	241,695	569,103	87,005	4,468	374,109	103,521
Nov	2,167,058	[1] 1,591,874	423,759	903,269	249,845	575,184	89,926	4,282	374,298	106,678
Dec	2,212,034	[1] 1,618,961	426,679	927,459	249,824	593,073	90,594	4,661	386,867	110,951
1987: Jan	2,208,974	[1] 1,612,682	423,333	924,546	249,803	596,292	91,421	4,430	389,424	111,017
Feb	2,228,408	[1] 1,622,814	416,735	931,790	259,289	605,594	92,218	4,384	393,672	115,320
Mar	2,244,023	[1] 1,635,716	406,194	955,265	259,257	608,307	93,042	4,934	391,415	118,915
Apr	2,265,559	[1] 1,639,156	400,653	964,265	259,238	626,403	93,826	4,773	403,750	124,054
May	2,274,341	[1] 1,640,597	395,105	961,922	268,570	633,744	94,588	5,073	409,890	124,193
June	2,306,705	[1] 1,658,996	391,049	984,385	268,561	647,710	95,232	5,071	421,579	125,828
July	2,304,494	[1] 1,651,627	375,314	992,774	268,539	652,867	95,895	4,426	422,440	130,105
Aug	2,341,659	[1] 1,685,707	390,561	1,002,535	277,611	655,952	96,448	4,430	426,711	128,363
Sept	2,347,750	[1] 1,675,980	378,263	1,005,127	277,590	671,769	97,004	4,350	440,658	129,758
Oct	2,372,089	[1] 1,692,601	390,304	1,009,870	277,582	679,488	97,610	3,980	447,904	129,994
Nov	2,407,080	[1] 1,716,023	390,714	1,027,972	282,493	691,057	98,482	3,793	449,009	139,773
Dec	2,428,935	[1] 1,724,689	389,497	1,037,861	282,486	704,246	99,236	3,976	461,261	139,773

[1] Includes Federal Financing Bank securities, not shown separately, in millions of dollars: 14,194 in January 1986; 14,169 in February–May 1986; 13,670 in August 1986; 15,000 in September 1986–September 1987; and 14,845 in October–December 1987.

[2] Nonmarketable certificates of indebtedness, notes, bonds, and bills in the Treasury foreign series of dollar-denominated and foreign-currency denominated issues.

[3] Includes depository bonds, retirement plan bonds, Rural Electrification Administration bonds, State and local bonds, and special issues held only by U.S. Government agencies and trust funds and the Federal home loan banks.

[4] Includes $5,610 million in certificates not shown separately.

Note.—Through fiscal year 1976, the fiscal year was on a July 1–June 30 basis; beginning October 1976 (fiscal year 1977), the fiscal year is on an October 1–September 30 basis.

Source: Department of the Treasury.

TABLE B–85.—*Maturity distribution and average length of marketable interest-bearing public debt securities held by private investors, 1967–87*

End of year or month	Amount outstanding, privately held	Maturity class					Average length	
		Within 1 year	1 to 5 years	5 to 10 years	10 to 20 years	20 years and over		
	Millions of dollars						Years	Months
Fiscal year:								
1967	150,321	56,561	53,584	21,057	6,153	12,968	5	1
1968	159,671	66,746	52,295	21,850	6,110	12,670	4	5
1969	156,008	69,311	50,182	18,078	6,097	12,337	4	2
1970	157,910	76,443	57,035	8,286	7,876	8,272	3	8
1971	161,863	74,803	58,557	14,503	6,357	7,645	3	6
1972	165,978	79,509	57,157	16,033	6,358	6,922	3	3
1973	167,869	84,041	54,139	16,385	8,741	4,564	3	1
1974	164,862	87,150	50,103	14,197	9,930	3,481	2	11
1975	210,382	115,677	65,852	15,385	8,857	4,611	2	8
1976	279,782	151,723	89,151	24,169	8,087	6,652	2	7
1977	326,674	161,329	113,319	33,067	8,428	10,531	2	11
1978	356,501	163,819	132,993	33,500	11,383	14,805	3	3
1979	380,530	181,883	127,574	32,279	18,489	20,304	3	7
1980	463,717	220,084	156,244	38,809	25,901	22,679	3	9
1981	549,863	256,187	182,237	48,743	32,569	30,127	4	0
1982	682,043	314,436	221,783	75,749	33,017	37,058	3	11
1983	862,631	379,579	294,955	99,174	40,826	48,097	4	1
1984	1,017,488	437,941	332,808	130,417	49,664	66,658	4	6
1985	1,185,675	472,661	402,766	159,383	62,853	88,012	4	11
1986	1,354,275	506,903	467,348	189,995	70,664	119,365	5	3
1987	1,445,366	483,582	526,746	209,160	72,862	153,016	5	9
1986: Jan	1,251,882	492,408	429,808	164,242	66,045	99,379	5	0
Feb	1,268,648	496,927	434,036	165,187	70,810	101,688	5	2
Mar	1,277,307	196,137	435,704	172,974	70,804	101,688	5	1
Apr	1,281,210	498,504	437,756	173,434	70,389	101,127	5	1
May	1,286,970	493,622	438,261	173,587	70,793	110,707	5	4
June	1,308,827	496,114	450,670	181,384	70,952	110,707	5	3
July	1,322,700	501,204	456,984	183,860	70,946	110,706	5	2
Aug	1,328,833	499,103	456,689	182,388	70,941	119,712	5	5
Sept	1,354,275	506,903	467,348	189,995	70,664	119,365	5	3
Oct	1,358,195	504,767	477,871	184,917	70,928	119,712	5	3
Nov	1,377,141	513,311	473,818	190,631	70,847	128,534	5	5
Dec	1,388,733	511,117	481,772	197,594	70,657	127,593	5	4
1987: Jan	1,392,298	511,792	480,085	201,022	70,861	128,538	5	4
Feb	1,410,621	509,182	492,477	199,928	73,553	135,481	5	7
Mar	1,420,644	496,642	506,646	208,331	73,544	135,481	5	6
Apr	1,401,609	489,343	496,631	207,786	73,158	134,691	5	6
May	1,415,262	487,944	508,008	201,683	73,196	144,431	5	9
June	1,428,020	482,919	518,547	209,422	72,903	144,229	5	8
July	1,424,781	476,623	520,691	210,380	72,859	144,228	5	8
Aug	1,459,793	495,018	528,692	209,710	73,036	153,338	5	9
Sept	1,445,366	483,582	526,746	209,160	72,862	153,016	5	9
Oct	1,457,652	500,525	523,169	209,135	72,776	152,047	5	8
Nov	1,478,550	503,235	530,327	214,818	74,051	156,119	5	9
Dec	1,483,625	502,918	528,258	222,785	73,875	155,789	5	9

Note.—All issues classified to final maturity.

Through fiscal year 1976, the fiscal year was on a July 1—June 30 basis; beginning October 1976 (fiscal year 1977), the fiscal year is on an October 1—September 30 basis.

Source: Department of the Treasury.

TABLE B–86.—*Estimated ownership of public debt securities by private investors, 1976–87*

[Par values; [1] billions of dollars]

End of month	Held by private investors											
	Total	Commercial banks [2]	Nonbank investors									
			Total	Individuals [3]			Insurance companies	Money market funds	Corporations [5]	State and local governments [6]	Foreign and international [7]	Other investors [8]
				Total	Savings bonds [4]	Other securities						
1976:												
June	376.4	91.4	285.0	96.1	69.6	26.5	14.4	0.8	23.3	34.2	69.8	46.4
Dec	409.5	103.5	306.0	101.6	72.0	29.6	16.2	1.1	23.5	40.9	78.1	44.6
1977:												
June	421.0	102.7	318.3	104.9	74.4	30.5	18.1	.8	22.1	50.3	87.9	34.2
Dec	461.3	98.9	362.4	107.8	76.7	31.1	19.9	.9	18.2	58.1	109.6	47.9
1978:												
June	477.8	97.8	380.0	109.0	79.1	29.9	19.7	1.3	17.3	70.0	119.5	43.2
Dec	508.6	95.0	413.6	114.0	80.7	33.3	20.0	1.5	17.3	76.1	133.1	51.6
1979:												
June	516.6	86.1	430.5	115.5	80.6	34.9	20.9	3.8	18.6	78.7	114.9	78.1
Dec	540.5	88.1	452.4	118.0	79.9	38.1	21.4	5.6	17.0	81.7	119.0	89.7
1980:												
June	558.2	97.4	460.8	116.5	73.4	43.1	22.3	5.3	14.0	83.3	118.2	101.2
Dec	616.4	112.1	504.3	117.1	72.5	44.6	24.0	3.5	19.3	87.9	129.7	122.8
1981:												
June	651.2	119.7	531.5	107.4	69.2	38.2	26.4	9.0	19.9	94.2	136.6	138.0
Dec	694.5	111.4	583.1	110.8	68.1	42.7	29.0	21.5	17.9	96.8	136.6	170.5
1982:												
Mar	733.3	116.1	617.2	112.5	67.5	45.0	32.1	25.7	16.9	99.0	136.1	194.9
June	740.9	116.1	624.8	114.1	67.4	46.7	32.5	22.4	17.6	103.3	137.2	197.7
Sept	791.2	117.8	673.4	115.6	67.6	48.0	34.8	38.6	21.6	109.0	140.6	213.2
Dec	848.4	131.4	717.0	116.5	68.3	48.2	39.1	42.6	24.5	116.6	149.5	228.2
1983:												
Mar	906.6	153.2	753.4	116.7	68.8	47.9	43.7	44.8	27.2	123.7	156.2	241.1
June	948.6	171.6	777.0	121.3	69.7	51.6	47.4	28.3	32.8	135.2	160.1	251.9
Sept	982.7	176.3	806.4	128.9	70.6	58.4	51.2	22.1	35.9	143.0	160.1	265.0
Dec	1,022.6	188.8	833.8	133.4	71.5	61.9	56.7	22.8	39.7	150.5	166.3	264.4
1984:												
Mar	1,073.0	189.8	883.2	136.2	72.2	64.0	60.7	19.4	42.6	157.7	166.3	300.3
June	1,102.2	182.3	919.9	142.2	72.9	69.3	63.4	14.9	45.3	165.4	171.6	317.1
Sept	1,154.1	183.0	971.1	142.4	73.7	68.7	68.4	13.6	47.7	170.4	175.5	353.1
Dec	1,212.5	183.4	1,029.1	143.8	74.5	69.3	76.4	25.9	50.1	173.4	192.9	366.6
1985:												
Mar	1,254.1	195.0	1,059.1	145.1	75.4	69.7	80.4	26.7	50.8	177.2	186.4	392.5
June	1,292.0	196.3	1,095.7	148.7	76.7	72.0	85.0	24.8	54.9	188.1	200.7	393.5
Sept	1,338.2	196.9	1,141.3	151.4	78.2	73.2	88.6	22.7	59.0	201.0	209.8	408.8
Dec	1,417.2	192.2	1,225.0	154.8	79.8	75.0	95.8	25.1	59.0	235.8	212.5	442.0
1986:												
Mar	1,473.1	195.1	1,278.0	157.8	81.4	76.4	98.8	29.9	59.6	245.8	226.5	459.6
June	1,502.7	197.2	1,305.5	159.5	83.8	75.7	97.7	22.8	61.2	255.3	240.4	468.6
Sept	1.553.3	212.5	1,340.8	158.0	87.1	70.9	100.9	24.9	65.7	260.2	253.2	477.9
Dec	1,602.0	230.1	1,371.9	162.9	92.3	70.5	106.9	28.6	68.8	273.1	251.6	480.1
1987:												
Mar	1,641.4	232.0	1,409.4	163.0	94.7	68.3	....	18.8	73.4	....	260.4	....
June	1,657.7	237.1	1,420.6	165.4	96.8	68.6	....	20.6	78.7	....	270.1	....
Sept	1,682.6	250.5	1,432.1	168.9	98.5	70.4	....	....	80.2	....	267.3	....

[1] U.S. savings bonds, series A–F and J, are included at current redemption value.

[2] Includes domestically chartered banks, U.S. branches and agencies of foreign banks, New York investment companies majority owned by foreign banks, and Edge Act corporations owned by domestically chartered and foreign banks.

[3] Includes partnerships and personal trust accounts.

[4] Includes U.S. savings notes. Sales began May 1, 1967, and were discontinued June 30, 1970.

[5] Exclusive of banks and insurance companies.

[6] Includes State and local pension funds.

[7] Consists of the investment of foreign balances and international accounts in the United States.

[8] Includes savings and loan associations, credit unions, nonprofit institutions, mutual savings banks, corporate pension trust funds, dealers and brokers, certain Government deposit accounts, and Government-sponsored agencies.

Source: Department of the Treasury.

CORPORATE PROFITS AND FINANCE

TABLE B–87.—*Corporate profits with inventory valuation and capital consumption adjustments, 1929–87*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Corporate profits with inventory valuation and capital consumption adjustments	Corporate profits tax liability	Corporate profits after tax with inventory valuation and capital consumption adjustments		
			Total	Dividends	Undistributed profits with inventory valuation and capital consumption adjustments
1929	9.6	1.4	8.2	5.8	2.4
1933	−1.5	.5	−2.1	2.0	−4.1
1939	5.5	1.4	4.0	3.8	.3
1940	8.8	2.8	5.9	4.0	1.9
1941	14.3	7.6	6.7	4.4	2.3
1942	19.7	11.4	8.3	4.3	4.0
1943	24.0	14.1	9.9	4.4	5.5
1944	24.2	12.9	11.2	4.6	6.6
1945	19.7	10.7	9.0	4.6	4.4
1946	17.2	9.1	8.0	5.6	2.5
1947	22.9	11.3	11.7	6.3	5.4
1948	30.3	12.4	17.8	7.0	10.8
1949	28.0	10.2	17.8	7.2	10.6
1950	34.9	17.9	17.0	8.8	8.2
1951	39.9	22.6	17.3	8.5	8.8
1952	37.5	19.4	18.1	8.5	9.6
1953	37.7	20.3	17.4	8.8	8.6
1954	36.6	17.6	19.0	9.1	9.8
1955	47.1	22.0	25.1	10.3	14.8
1956	45.7	22.0	23.8	11.1	12.7
1957	45.3	21.4	23.8	11.5	12.3
1958	40.3	19.0	21.4	11.3	10.1
1959	51.4	23.6	27.8	12.2	15.6
1960	49.5	22.7	26.8	12.9	13.9
1961	50.3	22.8	27.6	13.3	14.2
1962	58.3	24.0	34.3	14.4	19.9
1963	63.6	26.2	37.4	15.5	21.9
1964	70.7	28.0	42.7	17.3	25.3
1965	81.3	30.9	50.4	19.1	31.3
1966	86.6	33.7	52.9	19.4	33.5
1967	84.1	32.7	51.4	20.2	31.2
1968	90.7	39.4	51.4	22.0	29.4
1969	87.4	39.7	47.7	22.5	25.2
1970	74.7	34.4	40.3	22.5	17.9
1971	87.1	37.7	49.3	22.9	26.4
1972	100.7	41.9	58.8	24.4	34.4
1973	113.3	49.3	64.1	27.0	37.0
1974	101.7	51.8	49.9	29.7	20.2
1975	117.6	50.9	66.7	29.6	37.1
1976	145.2	64.2	81.0	34.6	46.4
1977	174.8	73.0	101.8	39.5	62.3
1978	197.2	83.5	113.7	44.7	69.0
1979	200.1	88.0	112.1	50.1	62.0
1980	177.2	84.8	92.4	54.7	37.7
1981	188.0	81.1	106.8	63.6	43.2
1982	150.0	63.1	86.9	66.9	20.0
1983	213.7	77.2	136.5	71.5	65.0
1984	266.9	93.9	173.0	79.0	94.0
1985	277.6	96.7	180.9	81.3	99.6
1986	284.4	105.0	179.4	86.8	92.6
1987 [p]	305.3	137.5	167.8	93.8	74.0
1982: IV	146.1	59.8	86.3	68.5	17.9
1983: IV	248.5	88.1	160.4	73.9	86.5
1984: IV	266.9	87.0	179.9	80.8	99.1
1985: I	265.6	94.0	171.6	81.2	90.4
II	274.2	93.2	181.0	81.3	99.7
III	292.8	100.5	192.3	81.2	111.1
IV	277.8	99.1	178.8	81.7	97.1
1986: I	288.0	98.1	189.9	84.3	105.6
II	282.3	102.1	180.2	86.6	93.6
III	286.4	106.1	180.3	87.7	92.6
IV	281.1	113.9	167.1	88.6	78.5
1987: I	294.0	128.0	165.9	90.3	75.6
II	296.8	134.2	162.6	92.4	70.1
III	314.9	143.0	172.0	95.2	76.8

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–88.—*Corporate profits by industry, 1929–87*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Corporate profits with inventory valuation adjustment and without capital consumption adjustment										
	Total	Domestic industries									Rest of the world
		Total	Financial [1]			Nonfinancial					
			Total	Federal Reserve banks	Other	Total	Manufacturing [2]	Transportation and public utilities	Wholesale and retail trade	Other	
1929	10.5	10.2	1.3	0.0	1.3	8.9	5.2	1.8	1.0	0.9	0.2
1933	−1.2	−1.2	.3	.0	.3	−1.5	−.4	.0	−.5	−.7	.0
1939	6.5	6.1	.8	.0	.8	5.3	3.3	1.0	.7	.3	.3
1940	9.8	9.6	1.0	.0	.9	8.6	5.5	1.3	1.2	.6	.3
1941	15.4	15.0	1.1	.0	1.0	14.0	9.5	2.0	1.4	1.1	.4
1942	20.5	20.1	1.2	.0	1.2	18.9	11.8	3.4	2.2	1.5	.4
1943	24.5	24.1	1.3	.0	1.3	22.8	13.8	4.4	3.0	1.6	.4
1944	24.0	23.5	1.6	.1	1.6	21.9	13.2	3.9	3.2	1.6	.4
1945	19.3	18.9	1.7	.1	1.6	17.3	9.7	2.7	3.3	1.5	.3
1946	19.6	18.9	2.1	.1	2.0	16.8	9.0	1.8	3.8	2.1	.7
1947	25.9	24.9	1.7	.1	1.6	23.2	13.6	2.2	4.6	2.9	1.0
1948	33.4	32.2	2.6	.2	2.3	29.6	17.6	3.0	5.5	3.6	1.3
1949	31.1	29.9	3.1	.2	2.9	26.8	16.2	3.0	4.5	3.1	1.1
1950	37.9	36.7	3.1	.2	3.0	33.5	20.9	4.0	5.0	3.6	1.3
1951	43.3	41.5	3.6	.3	3.3	37.9	24.6	4.6	5.0	3.7	1.7
1952	40.6	38.7	4.0	.4	3.7	34.7	21.7	4.9	4.8	3.3	1.9
1953	40.2	38.4	4.5	.4	4.1	33.9	22.0	5.0	3.8	3.1	1.8
1954	38.4	36.4	4.6	.3	4.3	31.8	19.9	4.7	3.8	3.4	2.0
1955	47.5	45.1	4.8	.3	4.5	40.3	26.0	5.6	5.0	3.6	2.4
1956	46.9	44.1	5.0	.5	4.5	39.1	24.7	5.9	4.5	4.1	2.8
1957	46.6	43.5	5.2	.6	4.6	38.3	24.0	5.8	4.4	4.0	3.1
1958	41.6	39.1	5.7	.6	5.1	33.5	19.4	5.9	4.6	3.6	2.5
1959	52.3	49.6	6.8	.7	6.0	42.9	26.4	7.0	5.9	3.6	2.7
1960	49.8	46.7	7.2	1.0	6.2	39.5	23.6	7.4	4.9	3.6	3.1
1961	50.1	46.8	7.0	.8	6.3	39.8	23.3	7.8	5.0	3.7	3.3
1962	55.2	51.5	7.3	.9	6.4	44.2	26.0	8.4	5.8	3.9	3.7
1963	59.8	55.8	6.8	1.0	5.8	49.0	29.3	9.3	5.9	4.4	4.0
1964	66.2	61.8	6.9	1.1	5.8	54.9	32.3	10.0	7.5	5.1	4.4
1965	76.2	71.5	7.5	1.4	6.2	64.0	39.3	11.0	8.1	5.6	4.6
1966	81.2	76.7	8.5	1.7	6.8	68.2	41.9	11.8	8.2	6.3	4.4
1967	78.6	73.9	9.0	2.0	7.0	64.9	38.6	10.7	9.1	6.5	4.7
1968	85.4	79.9	10.4	2.5	7.9	69.5	41.4	10.8	10.4	6.9	5.5
1969	81.4	74.8	11.2	3.1	8.1	63.7	36.7	10.3	10.5	6.1	6.5
1970	69.5	62.6	12.2	3.6	8.6	50.4	26.7	8.2	9.6	5.9	6.9
1971	82.7	75.1	14.1	3.3	10.7	61.0	34.3	8.5	11.7	6.5	7.6
1972	94.9	85.5	15.4	3.4	12.0	70.2	40.8	9.0	13.4	6.9	9.3
1973	107.1	92.6	15.8	4.5	11.2	76.8	46.2	8.5	13.9	8.2	14.5
1974	99.4	82.4	14.7	5.7	8.9	67.8	39.8	6.7	12.9	8.3	17.0
1975	123.9	109.5	11.2	5.7	5.5	98.3	53.6	10.3	22.2	12.2	14.4
1976	155.3	139.3	15.9	6.0	9.9	123.4	70.9	14.8	23.0	14.7	16.0
1977	183.8	165.5	21.6	6.2	15.4	143.9	80.6	17.9	27.5	17.8	18.3
1978	208.2	186.0	29.1	7.7	21.4	156.8	88.7	20.9	27.3	20.0	22.2
1979	214.1	180.4	27.8	9.6	18.2	152.6	87.5	15.2	28.7	21.1	33.7
1980	194.0	159.6	21.0	11.9	9.0	138.6	77.1	17.6	21.6	22.4	34.4
1981	202.3	173.8	16.5	14.5	1.9	157.3	88.5	19.5	32.5	16.8	28.5
1982	159.2	131.2	11.8	15.4	−3.6	119.4	58.0	19.3	34.6	7.5	28.0
1983	196.7	166.6	18.1	14.8	3.3	148.5	70.1	28.5	38.9	10.9	30.2
1984	234.2	203.3	13.0	16.7	−3.7	190.3	88.8	38.5	51.2	11.8	30.9
1985	224.1	193.6	18.4	16.8	1.6	175.2	72.2	37.5	51.4	14.1	30.5
1986	238.4	207.2	26.1	16.0	10.1	181.1	69.4	42.4	52.1	17.2	31.2
1987 ^{p}	257.2	225.0	27.5	16.0	11.4	197.5	90.2	37.9	52.0	17.5	32.2
1982: IV	150.7	121.6	18.7	14.8	3.9	102.9	46.8	16.3	33.6	6.2	29.1
1983: IV	223.4	190.7	15.5	15.4	.1	175.2	88.6	31.3	43.1	12.2	32.7
1984: IV	224.6	193.9	13.6	17.4	−3.8	180.3	79.8	38.1	51.8	10.5	30.6
1985: I	216.1	187.1	15.3	17.0	−1.7	171.8	67.8	39.8	52.0	12.2	29.0
II	219.8	189.2	19.1	17.1	2.0	170.1	68.4	36.6	52.8	12.3	30.7
III	236.8	208.3	18.4	16.6	1.8	189.9	80.1	39.3	55.7	14.8	28.5
IV	223.7	189.7	20.8	16.3	4.5	168.9	72.4	34.4	45.0	17.2	33.9
1986: I	236.7	202.3	26.2	16.9	9.3	176.2	61.9	39.4	55.8	19.1	34.4
II	235.6	207.0	26.9	16.1	10.8	180.0	72.5	42.3	48.2	17.0	28.7
III	242.4	210.2	25.2	15.6	9.6	185.1	68.0	46.0	54.6	16.5	32.1
IV	239.0	209.3	26.1	15.5	10.6	183.2	75.4	41.9	49.7	16.3	29.7
1987: I	245.7	213.1	27.6	15.7	11.9	185.5	75.4	37.4	56.2	16.6	32.6
II	248.8	215.8	27.8	16.1	11.7	188.0	85.5	39.0	45.2	18.3	33.0
III	267.3	235.4	27.0	16.1	10.9	208.4	100.7	37.9	52.1	17.6	31.9

---

[1] Consists of the following industries: Banking; credit agencies other than banks; security and commodity brokers, dealers, and services; insurance carriers; regulated investment companies; small business investment companies; and real estate investment trusts.

[2] See Table B–89 for industry detail.

Note.—The industry classification is on a company basis and is based on the 1972 Standard Industrial Classification (SIC) beginning 1948, and on the 1942 SIC prior to 1948.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–89.—*Corporate profits of manufacturing industries, 1929–87*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Corporate profits with inventory valuation adjustment and without capital consumption adjustment												
	Total manufacturing	Durable goods							Nondurable goods				
		Total	Primary metal industries	Fabricated metal products	Machinery, except electrical	Electric and electronic equipment	Motor vehicles and equipment	Other	Total	Food and kindred products	Chemicals and allied products	Petroleum and coal products	Other
1929	5.2	2.6	....	....	....	....	....	....	2.6	....	....	....	....
1933	−.4	−.4	....	....	....	....	....	....	.0	....	....	....	....
1939	3.3	1.7	....	....	....	....	....	....	1.7	....	....	....	....
1940	5.5	3.1	....	....	....	....	....	....	2.4	....	....	....	....
1941	9.5	6.4	....	....	....	....	....	....	3.1	....	....	....	....
1942	11.8	7.2	....	....	....	....	....	....	4.6	....	....	....	....
1943	13.8	8.1	....	....	....	....	....	....	5.7	....	....	....	....
1944	13.2	7.4	....	....	....	....	....	....	5.9	....	....	....	....
1945	9.7	4.5	....	....	....	....	....	....	5.2	....	....	....	....
1946	9.0	2.4	....	....	....	....	....	....	6.6	....	....	....	....
1947	13.6	5.8	....	....	....	....	....	....	7.8	....	....	....	....
1948	17.6	7.5	1.6	0.8	1.2	0.7	1.4	1.8	10.0	1.9	1.7	2.8	3.7
1949	16.2	8.1	1.5	.7	1.3	.8	2.1	1.7	8.1	1.6	1.8	1.9	2.8
1950	20.9	12.0	2.3	1.1	1.6	1.2	3.1	2.6	8.9	1.6	2.3	2.3	2.7
1951	24.6	13.2	3.1	1.3	2.3	1.3	2.4	2.8	11.4	1.4	2.8	2.7	4.4
1952	21.7	11.7	1.9	1.0	2.3	1.5	2.4	2.6	9.9	1.7	2.3	2.3	3.6
1953	22.0	11.9	2.5	1.0	1.9	1.4	2.6	2.6	10.1	1.8	2.2	2.8	3.3
1954	19.9	10.5	1.7	.9	1.7	1.2	2.1	2.9	9.4	1.6	2.2	2.7	2.9
1955	26.0	14.3	2.9	1.1	1.7	1.1	4.1	3.5	11.8	2.2	3.0	3.0	3.6
1956	24.7	12.8	3.0	1.1	2.1	1.2	2.2	3.2	11.9	1.8	2.8	3.3	4.1
1957	24.0	13.3	3.0	1.1	2.0	1.5	2.6	3.1	10.7	1.8	2.8	2.6	3.6
1958	19.4	9.3	1.9	.9	1.4	1.3	.9	2.9	10.0	2.1	2.5	2.1	3.3
1959	26.4	13.7	2.3	1.1	2.1	1.7	3.0	3.5	12.7	2.4	3.5	2.5	4.3
1960	23.6	11.6	2.0	.8	1.8	1.3	3.0	2.7	12.0	2.2	3.1	2.5	4.2
1961	23.3	11.4	1.6	1.0	1.9	1.3	2.5	3.1	11.9	2.3	3.2	2.2	4.1
1962	26.0	14.0	1.6	1.1	2.3	1.5	4.0	3.5	12.0	2.3	3.2	2.2	4.3
1963	29.3	16.3	2.0	1.3	2.5	1.6	4.9	4.0	13.1	2.7	3.6	2.1	4.6
1964	32.3	17.9	2.5	1.4	3.3	1.7	4.7	4.4	14.4	2.7	4.0	2.4	5.3
1965	39.3	23.0	3.1	2.0	3.9	2.7	6.2	5.1	16.3	2.8	4.6	2.9	6.0
1966	41.9	23.8	3.6	2.4	4.5	3.0	5.1	5.2	18.1	3.2	4.9	3.2	6.8
1967	38.6	21.0	2.7	2.4	4.1	2.9	3.9	4.9	17.6	3.2	4.3	3.9	6.3
1968	41.4	22.2	1.9	2.3	4.1	2.8	5.5	5.7	19.1	3.2	5.2	3.7	7.0
1969	36.7	19.0	1.4	2.0	3.7	2.3	4.8	4.9	17.7	3.0	4.6	3.3	6.9
1970	26.7	10.2	.8	1.1	3.0	1.2	1.2	2.9	16.5	3.2	3.9	3.5	5.9
1971	34.3	16.4	.7	1.5	2.9	1.9	5.1	4.3	17.9	3.5	4.5	3.6	6.4
1972	40.8	22.5	1.6	2.1	4.3	2.8	5.9	5.8	18.3	2.9	5.2	3.0	7.2
1973	46.2	24.7	2.3	2.6	4.7	3.0	5.8	6.2	21.6	2.5	6.0	5.2	7.9
1974	39.8	14.6	4.9	1.6	3.1	.3	.7	4.0	25.2	2.5	5.1	10.7	7.0
1975	53.6	19.8	2.7	3.1	4.8	2.4	2.0	4.8	33.8	8.8	6.4	9.5	9.1
1976	70.9	31.3	2.0	3.9	6.7	3.7	7.2	7.9	39.6	7.1	8.2	13.1	11.2
1977	80.6	38.6	1.3	4.4	8.9	5.8	9.4	8.8	42.0	6.9	7.8	12.9	14.4
1978	88.7	44.6	3.5	4.9	9.6	6.7	8.9	10.9	44.0	6.2	8.2	14.7	14.9
1979	87.5	37.3	3.6	5.2	9.1	5.2	4.7	9.5	50.2	5.8	7.2	22.5	14.7
1980	77.1	21.3	2.5	4.3	7.7	4.7	−2.5	4.5	55.8	6.1	5.4	31.4	12.9
1981	88.5	21.0	3.1	4.4	8.6	4.1	.1	.7	67.5	8.7	8.2	36.5	14.1
1982	58.0	2.1	−4.9	2.4	4.1	1.7	−.8	−.4	55.9	7.0	5.2	29.1	14.5
1983	70.1	17.2	−4.9	3.0	3.1	3.7	5.1	7.2	53.0	7.2	6.7	21.4	17.7
1984	88.8	38.1	−.6	4.7	6.2	5.5	9.0	13.3	50.7	6.7	8.0	17.2	18.8
1985	72.2	29.2	−2.5	4.0	4.2	4.5	6.5	12.6	43.0	7.0	4.2	13.7	18.0
1986	69.4	31.1	−1.8	4.1	3.9	4.3	5.9	14.7	38.4	8.7	6.7	5.4	17.6
1987 ᵖ	90.2	39.4	.6	4.8	5.6	5.0	5.7	17.8	50.8	9.2	9.1	11.7	20.8
1982: IV	46.8	−6.6	−5.1	.9	1.3	.1	−2.7	−1.2	53.5	7.1	3.2	25.9	17.3
1983: IV	88.6	29.4	−4.4	4.4	4.7	6.2	8.7	9.9	59.2	8.0	7.8	25.3	18.1
1984: IV	79.8	36.6	−.8	5.6	5.5	5.5	8.8	12.0	43.2	5.9	7.1	12.9	17.3
1985: I	67.8	28.1	−2.1	4.4	1.8	4.0	7.5	12.5	39.8	6.3	5.6	9.7	18.2
II	68.4	30.4	−3.5	4.4	4.6	5.0	7.2	12.8	38.1	7.0	5.2	7.6	18.4
III	80.1	31.5	−1.4	4.3	4.6	5.8	4.9	13.4	48.7	8.4	4.5	17.8	18.1
IV	72.4	27.0	−3.0	2.9	5.8	3.1	6.6	11.6	45.4	6.3	1.8	19.7	17.6
1986: I	61.9	27.7	−2.8	4.1	3.3	4.8	6.1	12.1	34.2	8.4	5.2	5.6	14.9
II	72.5	34.4	−1.5	4.4	5.5	7.0	5.9	13.1	38.1	8.4	5.8	7.3	16.6
III	68.0	31.0	−2.5	4.4	3.7	3.7	5.3	16.4	37.0	8.9	7.4	2.7	18.0
IV	75.4	31.3	−.4	3.6	3.1	1.6	6.4	17.0	44.1	9.1	8.4	5.9	20.8
1987: I	75.4	38.7	.8	3.9	4.9	2.9	7.1	19.1	36.7	7.7	7.9	2.3	18.8
II	85.5	37.4	−.7	3.8	5.0	5.6	7.4	16.3	48.2	8.4	7.8	12.7	19.2
III	100.7	42.8	1.4	6.7	7.0	6.2	3.5	18.0	57.9	11.1	10.2	14.7	21.9

Note.—The industry classification is on a company basis and is based on the 1972 Standard Industrial Classification (SIC) beginning 1948, and on the 1942 SIC prior to 1948.

Source: Department of Commerce, Bureau of Economic Analysis.

Table B–90.—*Sales, profits, and stockholders' equity, all manufacturing corporations, 1950–87*

[Billions of dollars]

Year or quarter	All manufacturing corporations				Durable goods industries				Nondurable goods industries			
	Sales (net)	Profits		Stockholders' equity[2]	Sales (net)	Profits		Stockholders' equity[2]	Sales (net)	Profits		Stockholders' equity[2]
		Before income taxes[1]	After income taxes			Before income taxes[1]	After income taxes			Before income taxes[1]	After income taxes	
1950	181.9	23.2	12.9	83.3	86.8	12.9	6.7	39.9	95.1	10.3	6.1	43.5
1951	245.0	27.4	11.9	98.3	116.8	15.4	6.1	47.2	128.1	12.1	5.7	51.1
1952	250.2	22.9	10.7	103.7	122.0	12.9	5.5	49.8	128.0	10.0	5.2	53.9
1953	265.9	24.4	11.3	108.2	137.9	14.0	5.8	52.4	128.0	10.4	5.5	55.7
1954	248.5	20.9	11.2	113.1	122.8	11.4	5.6	54.9	125.7	9.6	5.6	58.2
1955	278.4	28.6	15.1	120.1	142.1	16.5	8.1	58.8	136.3	12.1	7.0	61.3
1956	307.3	29.8	16.2	131.6	159.5	16.5	8.3	65.2	147.8	13.2	7.8	66.4
1957	320.0	28.2	15.4	141.1	166.0	15.8	7.9	70.5	154.1	12.4	7.5	70.6
1958	305.3	22.7	12.7	147.4	148.6	11.4	5.8	72.8	156.7	11.3	6.9	74.6
1959	338.0	29.7	16.3	157.1	169.4	15.8	8.1	77.9	168.5	13.9	8.3	79.2
1960	345.7	27.5	15.2	165.4	173.9	14.0	7.0	82.3	171.8	13.5	8.2	83.1
1961	356.4	27.5	15.3	172.6	175.2	13.6	6.9	84.9	181.2	13.9	8.5	87.7
1962	389.4	31.9	17.7	181.4	195.3	16.8	8.6	89.1	194.1	15.1	9.2	92.3
1963	412.7	34.9	19.5	189.7	209.0	18.5	9.5	93.3	203.6	16.4	10.0	96.3
1964	443.1	39.6	23.2	199.8	226.3	21.2	11.6	98.5	216.8	18.3	11.6	101.3
1965	492.2	46.5	27.5	211.7	257.0	26.2	14.5	105.4	235.2	20.3	13.0	106.3
1966	554.2	51.8	30.9	230.3	291.7	29.2	16.4	115.2	262.4	22.6	14.6	115.1
1967	575.4	47.8	29.0	247.6	300.6	25.7	14.6	125.0	274.8	22.0	14.4	122.6
1968	631.9	55.4	32.1	265.9	335.5	30.6	16.5	135.6	296.4	24.8	15.5	130.3
1969	694.6	58.1	33.2	289.9	366.5	31.5	16.9	147.6	328.1	26.6	16.4	142.3
1970	708.8	48.1	28.6	306.8	363.1	23.0	12.9	155.1	345.7	25.2	15.7	151.7
1971	751.1	52.9	31.0	320.8	381.8	26.5	14.5	160.4	369.3	26.5	16.5	160.5
1972	849.5	63.2	36.5	343.4	435.8	33.6	18.4	171.4	413.7	29.6	18.0	172.0
1973	1,017.2	81.4	48.1	374.1	527.3	43.6	24.8	188.7	489.9	37.8	23.3	185.4
1973: IV	275.1	21.4	13.0	386.4	140.1	10.8	6.3	194.7	135.0	10.6	6.7	191.7
New series:												
1973: IV	236.6	20.6	13.2	368.0	122.7	10.1	6.2	185.8	113.9	10.5	7.0	182.1
1974	1,060.6	92.1	58.7	395.0	529.0	41.1	24.7	196.0	531.6	51.0	34.1	199.0
1975	1,065.2	79.9	49.1	423.4	521.1	35.3	21.4	208.1	544.1	44.6	27.7	215.3
1976	1,203.2	104.9	64.5	462.7	589.6	50.7	30.8	224.3	613.7	54.3	33.7	238.4
1977	1,328.1	115.1	70.4	496.7	657.3	57.9	34.8	239.9	670.8	57.2	35.5	256.8
1978	1,496.4	132.5	81.1	540.5	760.7	69.6	41.8	262.6	735.7	62.9	39.3	277.9
1979	1,741.8	154.2	98.7	600.5	865.7	72.4	45.2	292.5	876.1	81.8	53.5	308.0
1980	1,912.8	145.8	92.6	668.1	889.1	57.4	35.6	317.7	1,023.7	88.4	56.9	350.4
1981	2,144.7	158.6	101.3	743.4	979.5	67.2	41.6	350.4	1,165.2	91.3	59.6	393.0
1982	2,039.4	108.2	70.9	770.2	913.1	34.7	21.7	355.5	1,126.4	73.6	49.3	414.7
1983	2,114.3	133.1	85.8	812.8	973.5	48.7	30.0	372.4	1,140.8	84.4	55.8	440.4
1984	2,335.0	165.6	107.6	864.2	1,107.6	75.5	48.9	395.6	1,227.5	90.0	58.8	468.5
1985	2,331.4	137.0	87.6	866.2	1,142.6	61.5	38.6	420.9	1,188.8	75.6	49.1	445.3
1986	2,220.9	129.3	83.1	874.7	1,125.5	52.1	32.6	436.3	1,095.4	77.2	50.5	438.4
1985: I	565.3	35.5	22.5	861.4	276.3	15.5	9.5	414.1	289.1	20.0	13.0	447.3
II	594.1	37.3	23.6	864.0	293.6	18.6	11.4	420.4	300.5	18.7	12.2	443.6
III	578.0	33.5	21.4	868.8	281.1	13.3	8.5	423.7	296.9	20.2	12.9	445.1
IV	593.9	30.7	20.1	870.7	291.6	14.0	9.1	425.6	302.3	16.7	11.0	445.1
1986: I	544.0	31.0	19.4	863.7	270.7	12.9	7.8	431.7	273.3	18.1	11.6	432.0
II	566.2	38.7	26.7	876.9	289.4	17.5	11.8	436.2	276.8	21.2	14.9	440.8
III	546.3	30.6	18.4	880.2	275.4	11.5	6.6	440.8	270.9	19.1	11.7	439.4
IV	564.5	29.0	18.7	878.1	290.0	10.2	6.4	436.6	274.5	18.8	12.3	441.6
1987: I	553.0	37.3	24.0	884.8	279.9	16.5	10.1	438.5	273.1	20.8	13.9	446.3
II	592.7	47.1	31.3	893.0	298.7	22.5	14.9	449.2	294.0	24.6	16.4	443.8
III	593.9	48.9	33.1	910.5	291.5	20.6	14.4	451.3	302.4	28.3	18.7	459.2

[1] In the old series, "income taxes" refers to Federal income taxes only, as State and local income taxes had already been deducted. In the new series, no income taxes have been deducted.

[2] Annual data are average equity for the year (using four end-of-quarter figures).

Note.—Data are not necessarily comparable from one period to another due to changes in accounting procedures, industry classifications, sampling procedures, etc. For explanatory notes concerning compilation of the series, see "Quarterly Financial Report for Manufacturing, Mining, and Trade Corporations," Department of Commerce, Bureau of the Census.

Source: Department of Commerce, Bureau of the Census.

TABLE B–91.—*Relation of profits after taxes to stockholders' equity and to sales, all manufacturing corporations, 1947–87*

Year or quarter	Ratio of profits after income taxes (annual rate) to stockholders' equity—percent [1]			Profits after income taxes per dollar of sales—cents		
	All manufacturing corporations	Durable goods industries	Nondurable goods industries	All manufacturing corporations	Durable goods industries	Nondurable goods industries
1947	15.6	14.4	16.6	6.7	6.7	6.7
1948	16.0	15.7	16.2	7.0	7.1	6.8
1949	11.6	12.1	11.2	5.8	6.4	5.4
1950	15.4	16.9	14.1	7.1	7.7	6.5
1951	12.1	13.0	11.2	4.9	5.3	4.5
1952	10.3	11.1	9.7	4.3	4.5	4.1
1953	10.5	11.1	9.9	4.3	4.2	4.3
1954	9.9	10.3	9.6	4.5	4.6	4.4
1955	12.6	13.8	11.4	5.4	5.7	5.1
1956	12.3	12.8	11.8	5.3	5.2	5.3
1957	10.9	11.3	10.6	4.8	4.8	4.9
1958	8.6	8.0	9.2	4.2	3.9	4.4
1959	10.4	10.4	10.4	4.8	4.8	4.9
1960	9.2	8.5	9.8	4.4	4.0	4.8
1961	8.9	8.1	9.6	4.3	3.9	4.7
1962	9.8	9.6	9.9	4.5	4.4	4.7
1963	10.3	10.1	10.4	4.7	4.5	4.9
1964	11.6	11.7	11.5	5.2	5.1	5.4
1965	13.0	13.8	12.2	5.6	5.7	5.5
1966	13.4	14.2	12.7	5.6	5.6	5.6
1967	11.7	11.7	11.8	5.0	4.8	5.3
1968	12.1	12.2	11.9	5.1	4.9	5.2
1969	11.5	11.4	11.5	4.8	4.6	5.0
1970	9.3	8.3	10.3	4.0	3.5	4.5
1971	9.7	9.0	10.3	4.1	3.8	4.5
1972	10.6	10.8	10.5	4.3	4.2	4.4
1973	12.8	13.1	12.6	4.7	4.7	4.8
1973: IV	13.4	12.9	14.0	4.7	4.5	5.0
New series:						
1973: IV	14.3	13.3	15.3	5.6	5.0	6.1
1974	14.9	12.6	17.1	5.5	4.7	6.4
1975	11.6	10.3	12.9	4.6	4.1	5.1
1976	13.9	13.7	14.2	5.4	5.2	5.5
1977	14.2	14.5	13.8	5.3	5.3	5.3
1978	15.0	16.0	14.2	5.4	5.5	5.3
1979	16.4	15.4	17.4	5.7	5.2	6.1
1980	13.9	11.2	16.3	4.8	4.0	5.6
1981	13.6	11.9	15.2	4.7	4.2	5.1
1982	9.2	6.1	11.9	3.5	2.4	4.4
1983	10.6	8.1	12.7	4.1	3.1	4.9
1984	12.5	12.4	12.5	4.6	4.4	4.8
1985	10.1	9.2	11.0	3.8	3.4	4.1
1986	9.5	7.5	11.5	3.7	2.9	4.6
1985: I	10.5	9.2	11.7	4.0	3.4	4.5
II	10.9	10.0	11.0	4.0	3.9	4.0
III	9.9	8.0	11.6	3.7	3.0	4.3
IV	9.3	8.6	9.9	3.4	3.1	3.6
1986: I	9.0	7.2	10.8	3.6	2.9	4.2
II	12.2	10.8	13.5	4.7	4.1	5.4
III	8.4	6.0	10.7	3.4	2.4	4.3
IV	8.5	5.9	11.1	3.3	2.2	4.5
1987: I	10.8	9.2	12.5	4.3	3.6	5.1
II	14.0	13.3	14.8	5.3	5.0	5.6
III	14.5	12.8	16.3	5.6	4.9	6.2

[1] Annual ratios based on average equity for the year (using four end-of-quarter figures). Quarterly ratios based on equity at end of quarter only.

Note.—Based on data in millions of dollars.
See Note, Table B–90.

Source: Department of Commerce, Bureau of the Census.

TABLE B–92.—*Sources and uses of funds, nonfarm nonfinancial corporate business, 1946–87*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Sources											Uses			Discrepancy (sources less uses)
	Total	Internal					External					Total	Capital expenditures[3]	Increase in financial assets	
		Total	Domestic undistributed profits	Inventory valuation and capital consumption adjustments	Capital consumption allowances	Foreign earnings[1]	Total	Credit market funds			Other[2]				
								Total	Securities and mortgages	Loans and short-term paper					
1946	19.1	8.5	8.1	−7.6	7.4	0.7	10.6	6.9	3.6	3.3	3.7	17.5	18.8	−1.4	1.6
1947	27.4	13.3	12.1	−8.7	9.0	1.0	14.1	8.4	5.4	3.0	5.8	26.5	18.1	8.4	1.0
1948	29.4	19.7	13.2	−5.2	10.4	1.3	9.8	6.5	6.7	−.2	3.3	25.6	20.7	5.0	3.8
1949	20.5	20.0	8.7	−1.0	11.2	1.1	.4	3.1	4.9	−1.8	−2.7	18.4	14.9	3.5	2.1
1950	42.5	18.5	13.1	−7.9	12.0	1.3	24.0	8.1	4.2	3.9	15.9	40.4	24.0	16.4	2.2
1951	37.0	20.8	9.6	−4.4	13.8	1.7	16.2	10.5	6.4	4.1	5.7	37.9	30.6	7.4	−1.0
1952	30.5	22.5	7.8	−2.0	14.8	1.9	8.0	9.5	8.1	1.5	−1.5	30.0	25.4	4.6	.5
1953	28.6	22.3	8.0	−3.3	15.9	1.8	6.3	5.8	6.2	−.4	.5	28.5	26.2	2.3	.1
1954	30.1	24.4	7.6	−1.9	16.8	2.0	5.7	6.5	6.8	−.3	−.8	28.1	23.3	4.9	1.9
1955	53.4	29.9	11.8	−2.0	17.8	2.4	23.4	10.4	6.6	3.8	13.1	49.1	32.5	16.5	4.3
1956	45.2	30.1	10.9	−3.7	20.0	2.8	15.2	12.7	7.4	5.3	2.5	41.1	37.2	4.0	4.1
1957	43.5	32.0	9.6	−2.7	22.0	3.1	11.5	11.9	10.1	1.8	−.4	40.0	35.7	4.2	3.6
1958	42.3	30.7	6.5	−1.5	23.1	2.5	11.6	10.4	10.5	.0	1.2	38.6	27.8	10.8	3.7
1959	56.8	36.4	10.6	−1.0	24.1	2.7	20.3	12.4	8.3	4.2	7.9	52.1	38.0	14.2	4.6
1960	48.8	35.9	8.0	−.4	25.1	3.1	13.0	11.8	7.4	4.4	1.2	41.8	37.8	3.9	7.0
1961	56.0	36.9	7.2	.6	25.9	3.3	19.1	12.2	10.5	1.7	6.9	50.7	36.5	14.2	5.3
1962	60.3	43.2	9.6	3.1	26.8	3.7	17.1	12.5	9.0	3.5	4.6	56.2	43.8	12.5	4.1
1963	68.5	47.0	11.0	3.9	28.0	4.1	21.5	12.0	8.1	3.9	9.5	60.3	44.6	15.7	8.2
1964	74.1	52.3	14.6	3.9	29.4	4.4	21.8	13.7	7.8	5.9	8.0	64.9	50.1	14.9	9.1
1965	92.3	59.1	19.1	3.9	31.5	4.7	33.2	18.4	7.0	11.4	14.8	83.4	61.6	21.8	8.9
1966	98.4	63.3	21.2	3.3	34.3	4.5	35.1	23.9	14.3	9.5	11.2	92.0	75.3	16.7	6.3
1967	94.8	64.2	18.1	3.9	37.6	4.6	30.6	27.3	19.2	8.1	3.3	87.6	71.2	16.4	7.2
1968	114.7	65.8	17.1	1.7	41.4	5.5	48.9	28.0	15.0	13.0	20.9	106.2	75.4	30.8	8.5
1969	117.9	65.2	13.4	.0	45.4	6.5	52.6	33.8	14.6	19.2	18.8	115.0	83.3	31.7	2.9
1970	102.2	62.8	7.6	−1.6	49.9	6.9	39.5	34.2	26.3	7.9	5.3	97.9	79.2	18.7	4.3
1971	126.4	74.7	12.7	−.5	54.8	7.6	51.7	37.1	32.8	4.3	14.6	121.8	85.1	36.7	4.6
1972	153.4	86.4	18.1	−1.2	60.1	9.3	67.0	43.8	26.4	17.4	23.2	145.1	95.0	50.1	8.3
1973	195.5	93.9	28.8	−14.7	65.2	14.5	101.6	57.6	20.7	36.9	44.0	189.7	119.0	70.7	5.8
1974	194.1	89.3	34.1	−38.1	76.3	17.0	104.8	70.3	26.4	43.9	34.5	191.1	138.6	52.5	3.0
1975	158.4	124.8	36.4	−17.9	91.9	14.4	33.6	27.1	38.5	−11.5	6.5	153.4	112.3	41.1	5.0
1976	219.1	142.0	49.1	−25.4	102.3	16.0	77.1	55.0	38.4	16.7	22.1	210.4	156.9	53.5	8.7
1977	261.4	165.1	58.4	−26.0	114.3	18.3	96.3	72.0	36.0	36.1	24.3	242.2	179.6	62.6	19.3
1978	328.5	182.3	66.9	−36.6	129.8	22.2	146.3	85.0	33.3	51.8	61.2	309.7	217.0	92.7	18.9
1979	352.6	197.6	71.5	−57.2	149.6	33.7	155.1	87.8	21.0	66.9	67.3	370.6	238.3	132.3	−17.9
1980	345.9	200.1	53.7	−59.2	171.3	34.4	145.8	92.7	53.1	39.5	53.2	352.1	243.7	108.4	−6.2
1981	383.3	239.5	50.2	−38.0	198.8	28.5	143.9	94.5	22.8	71.7	49.3	368.6	286.5	82.0	14.8
1982	327.5	242.3	11.6	−18.7	221.4	28.1	85.1	80.4	44.0	36.4	4.7	303.5	256.5	47.0	24.0
1983	432.3	285.7	22.2	5.1	228.2	30.2	146.6	88.6	57.3	31.3	58.0	399.8	274.7	125.1	32.5
1984	518.5	336.3	41.8	25.1	238.4	30.9	182.2	121.6	−7.5	129.0	60.7	488.0	370.9	117.1	30.5
1985	492.3	355.4	23.4	50.3	251.2	30.5	136.9	85.2	15.3	69.9	51.7	442.4	342.8	99.7	49.9
1986	491.3	351.5	7.5	49.9	262.8	31.2	139.9	109.5	33.3	76.1	30.4	438.3	339.2	99.1	53.0
1985:															
I	406.5	342.3	20.8	46.0	246.5	29.0	64.3	26.2	−20.4	46.5	38.1	410.0	334.1	76.0	−3.5
II	454.6	354.9	20.8	53.9	249.6	30.6	99.6	69.2	18.8	50.4	30.4	394.0	345.5	48.5	60.6
III	503.5	367.7	26.7	59.9	252.7	28.5	135.7	55.0	20.1	34.9	80.7	441.9	337.9	103.9	61.6
IV	604.8	356.6	25.4	41.5	255.8	33.9	248.1	190.5	42.6	147.9	57.7	523.8	353.5	170.3	81.0
1986:															
I	426.3	360.6	2.3	66.0	257.8	34.4	65.8	54.3	61.5	−7.2	11.4	388.3	364.6	23.7	38.0
II	499.9	350.9	5.9	55.0	261.4	28.7	149.0	117.6	52.2	65.3	31.4	426.3	340.5	85.8	73.6
III	442.0	352.2	8.6	47.4	264.1	32.1	89.8	64.1	31.8	32.4	25.7	398.4	321.5	76.9	43.6
IV	597.1	342.2	13.3	31.2	268.1	29.7	254.9	201.9	−12.2	214.1	53.0	540.4	330.2	210.1	56.8
1987:															
I	439.3	343.2	5.3	35.0	270.3	32.6	96.1	30.8	92.3	−61.5	65.3	379.3	354.6	24.7	60.0
II	491.1	340.8	8.8	26.3	272.8	32.9	150.3	113.8	22.3	91.4	36.5	423.8	346.0	77.8	67.3
III	487.4	351.7	12.3	30.0	275.7	33.7	135.7	77.6	58.0	19.5	58.1	433.9	347.8	86.1	53.5

---

[1] Foreign branch profits, dividends, and subsidiaries' earnings retained abroad.

[2] Consists of tax liabilities, trade debt, and direct foreign investment in the United States.

[3] Plant and equipment, residential structures, inventory investment, and mineral rights from U.S. Government.

Source: Board of Governors of the Federal Reserve System.

TABLE B-93.—*State and municipal and business securities offered, 1940–87*

[Millions of dollars]

Year or quarter	State and municipal securities offered for cash (principal amounts)	Business securities offered for cash [1]								
		Total offerings	Type of security			Industry of issuer				
			Common stock [2]	Preferred stock	Bonds and notes	Manufacturing [3]	Electric, gas, and water [4]	Transportation [5]	Communication	Other
1940	1,238	2,677	108	183	2,386	992	1,203	324		159
1941	956	2,667	110	167	2,389	848	1,357	366		96
1942	524	1,062	34	112	917	539	472	48		4
1943	435	1,170	56	124	990	510	477	161		21
1944	661	3,202	163	369	2,670	1,061	1,422	609		109
1945	795	6,011	397	758	4,855	2,026	2,319	1,454		211
1946	1,157	6,900	891	1,127	4,882	3,701	2,158	711		329
1947	2,324	6,577	779	762	5,036	2,742	3,257	286		293
1948	2,690	7,078	614	492	5,973	2,226	2,187	755	902	1,008
1949	2,907	6,052	736	425	4,890	1,414	2,320	800	571	946
1950	3,532	6,362	811	631	4,920	1,200	2,649	813	399	1,300
1951	3,189	7,741	1,212	838	5,691	3,122	2,455	494	612	1,058
1952	4,401	9,534	1,369	564	7,601	4,039	2,675	992	760	1,068
1953	5,558	8,898	1,326	489	7,083	2,254	3,029	595	882	2,138
1954	6,969	9,516	1,213	816	7,488	2,268	3,713	778	720	2,037
1955	5,977	10,240	2,185	635	7,420	2,994	2,464	893	1,132	2,757
1956	5,446	10,939	2,301	636	8,002	3,647	2,529	724	1,419	2,619
1957	6,958	12,884	2,516	411	9,957	4,234	3,938	824	1,462	2,426
1958	7,449	11,558	1,334	571	9,653	3,515	3,804	824	1,424	1,991
1959	7,681	9,748	2,027	531	7,190	2,073	3,258	967	717	2,733
1960	7,230	10,154	1,664	409	8,081	2,152	2,851	718	1,050	3,383
1961	8,360	13,165	3,294	450	9,420	4,077	3,032	694	1,834	3,527
1962	8,558	10,705	1,314	422	8,969	3,249	2,825	567	1,303	2,761
1963	10,107	12,211	1,011	343	10,856	3,514	2,677	957	1,105	3,957
1964	10,544	13,957	2,679	412	10,865	3,046	2,760	982	2,189	4,980
1965	11,148	14,782	1,473	724	12,585	5,414	2,934	702	945	4,787
1966	11,089	17,385	1,901	580	14,904	7,056	3,666	1,494	2,003	3,167
1967	14,288	24,014	1,927	881	21,206	11,069	4,935	1,639	1,975	4,396
1968	16,374	21,261	3,885	636	16,740	6,958	5,293	1,564	1,775	5,671
1969	11,460	25,997	7,640	691	17,666	6,346	6,715	1,779	2,172	8,985
1970	17,762	37,451	7,037	1,390	29,023	10,647	11,009	1,253	5,291	9,252
1971	24,370	43,229	9,485	3,683	30,061	11,651	11,721	1,148	5,840	12,867
1972	22,941	39,705	10,707	3,371	25,628	6,398	11,314	860	4,836	16,298
1973	22,953	31,680	7,642	3,341	20,700	4,832	10,269	811	4,872	10,897
1974	22,824	37,820	4,050	2,273	31,497	10,511	12,836	1,005	3,932	9,632
1975	29,326	53,632	7,414	3,459	42,759	18,652	15,893	3,637	4,466	10,983
1976	33,845	53,314	8,305	2,803	42,206	15,496	14,418	4,649	3,562	15,194
1977	45,060	54,229	8,047	3,916	42,266	13,757	13,704	3,218	4,443	19,113
1978 [6]	46,215	29,949	7,724	1,757	20,468	4,483	9,138	1,251	2,959	12,120
1979	42,261	37,248	8,816	1,964	26,468	6,643	9,937	1,640	4,482	14,547
1980	47,133	67,126	19,282	3,194	44,650	20,857	13,746	2,306	6,865	23,356
1981	46,134	65,434	25,491	1,697	38,246	14,696	13,075	2,386	5,871	29,406
1982	77,179	73,291	23,619	4,953	44,719	13,771	16,529	1,800	3,899	37,292
1983	83,348	102,406	45,228	7,693	49,485	22,958	12,749	4,007	5,527	57,165
1984	101,882	93,259	66,792	4,219	22,248	15,626	7,852	1,638	2,267	65,876
1985	203,954	132,120	89,241	6,399	36,480	26,561	10,039	4,036	4,153	87,331
1986	142,544	228,104	55,317	11,499	161,288	41,365	23,933	4,560	11,786	146,460
1987: First three quarters	74,409	186,440	46,901	8,489	131,050	32,248	13,827	5,513	2,887	131,965
1986: I	12,523	56,560	14,481	3,292	38,787	10,250	5,607	1,837	4,419	34,447
II	36,949	63,997	13,087	2,767	48,143	12,189	6,845	1,368	3,089	40,506
III	53,219	42,713	11,138	2,421	29,154	6,496	4,671	294	1,909	29,343
IV	39,853	64,834	16,611	3,019	45,204	12,430	6,810	1,061	2,369	42,164
1987: I	29,762	69,588	15,983	4,088	49,517	13,957	5,757	2,874	610	46,390
II	24,680	59,077	17,206	2,292	39,579	10,279	4,229	1,090	1,382	42,097
III	19,967	57,775	13,712	2,109	41,954	8,012	3,841	1,549	895	43,478

---

[1] Business securities offered include securities offered by corporate and non-corporate business enterprises such as limited partnerships. Beginning 1978 excludes private placements.

[2] Common stock combines the conventional ownership shares of corporate business and securities issued by non-corporate business, *e.g.*, limited partnership interests, voting trust certificates, and condominium securities.

[3] Prior to 1948, also includes extractive, radio broadcasting, airline companies, commercial, and miscellaneous company issues.

[4] Prior to 1948, also includes telephone, street railway, and bus company issues.

[5] Prior to 1948, includes railroad issues only.

[6] Beginning 1978, business security offerings exclude private placements.

Note.—Covers substantially all new issues of State, municipal, and business securities offered for cash sale in the United States in amounts over $100,000 and with terms to maturity of more than 1 year; excludes notes issued exclusively to commercial banks, intercorporate transactions, and issues to be sold over an extended period, such as employee-purchase plans. Closed-end investment company issues are included beginning 1973.

Sources: Securities and Exchange Commission, "The Commercial and Financial Chronicle," and "The Bond Buyer."

TABLE B-94.—*Common stock prices and yields, 1949–87*

Year or month	Common stock prices[1]							Common stock yields (percent)[5]	
	New York Stock Exchange indexes (Dec. 31, 1965=50)[2]					Dow Jones industrial average[3]	Standard & Poor's composite index (1941–43=10)[4]	Dividend-price ratio[6]	Earnings-price ratio[7]
	Composite	Industrial	Transportation	Utility	Finance				
1949	9.02	....	....	....	....	179.48	15.23	6.59	15.48
1950	10.87	....	....	....	....	216.31	18.40	6.57	13.99
1951	13.08	....	....	....	....	257.64	22.34	6.13	11.82
1952	13.81	....	....	....	....	270.76	24.50	5.80	9.47
1953	13.67	....	....	....	....	275.97	24.73	5.80	10.26
1954	16.19	....	....	....	....	333.94	29.69	4.95	8.57
1955	21.54	....	....	....	....	442.72	40.49	4.08	7.95
1956	24.40	....	....	....	....	493.01	46.62	4.09	7.55
1957	23.67	....	....	....	....	475.71	44.38	4.35	7.89
1958	24.56	....	....	....	....	491.66	46.24	3.97	6.23
1959	30.73	....	....	....	....	632.12	57.38	3.23	5.78
1960	30.01	....	....	....	....	618.04	55.85	3.47	5.90
1961	35.37	....	....	....	....	691.55	66.27	2.98	4.62
1962	33.49	....	....	....	....	639.76	62.38	3.37	5.82
1963	37.51	....	....	....	....	714.81	69.87	3.17	5.50
1964	43.76	....	....	....	....	834.05	81.37	3.01	5.32
1965	47.39	....	....	....	....	910.88	88.17	3.00	5.59
1966	46.15	46.18	50.26	45.41	44.45	873.60	85.26	3.40	6.63
1967	50.77	51.97	53.51	45.43	49.82	879.12	91.93	3.20	5.73
1968	55.37	58.00	50.58	44.19	65.85	906.00	98.70	3.07	5.67
1969	54.67	57.44	46.96	42.80	70.49	876.72	97.84	3.24	6.08
1970	45.72	48.03	32.14	37.24	60.00	753.19	83.22	3.83	6.45
1971	54.22	57.92	44.35	39.53	70.38	884.76	98.29	3.14	5.41
1972	60.29	65.73	50.17	38.48	78.35	950.71	109.20	2.84	5.50
1973	57.42	63.08	37.74	37.69	70.12	923.88	107.43	3.06	7.12
1974	43.84	48.08	31.89	29.79	49.67	759.37	82.85	4.47	11.59
1975	45.73	50.52	31.10	31.50	47.14	802.49	86.16	4.31	9.15
1976	54.46	60.44	39.57	36.97	52.94	974.92	102.01	3.77	8.90
1977	53.69	57.86	41.09	40.92	55.25	894.63	98.20	4.62	10.79
1978	53.70	58.23	43.50	39.22	56.65	820.23	96.02	5.28	12.03
1979	58.32	64.76	47.34	38.20	61.42	844.40	103.01	5.47	13.46
1980	68.10	78.70	60.61	37.35	64.25	891.41	118.78	5.26	12.66
1981	74.02	85.44	72.61	38.91	73.52	932.92	128.05	5.20	11.96
1982	68.93	78.18	60.41	39.75	71.99	884.36	119.71	5.81	11.60
1983	92.63	107.45	89.36	47.00	95.34	1,190.34	160.41	4.40	8.03
1984	92.46	108.01	85.63	46.44	89.28	1,178.48	160.46	4.64	10.02
1985	108.09	123.79	104.11	56.75	114.21	1,328.23	186.84	4.25	8.12
1986	136.00	155.85	119.87	71.36	147.20	1,792.76	236.34	3.49	6.09
1987	161.70	195.31	140.39	74.30	146.48	2,275.99	286.83	3.08	....
1986: Jan	120.16	137.13	115.72	62.46	132.36	1,534.86	208.19	3.90	....
Feb	126.43	144.03	124.18	65.18	142.13	1,652.73	219.37	3.72	....
Mar	133.97	152.75	128.66	68.06	153.94	1,757.35	232.33	3.50	608
Apr	137.27	157.30	126.17	69.46	155.07	1,807.05	237.97	3.43	....
May	137.37	158.59	122.21	68.65	151.28	1,801.80	238.46	3.42	....
June	140.82	163.15	120.65	70.69	151.73	1,867.70	245.30	3.36	5.86
July	138.32	158.06	112.03	74.20	150.23	1,809.92	240.18	3.43	....
Aug	140.91	160.10	111.24	77.84	152.90	1,843.45	245.00	3.36	....
Sept	137.06	156.52	114.06	74.56	145.56	1,813.47	238.27	3.43	6.42
Oct	136.74	156.56	120.04	73.38	143.89	1,817.04	237.36	3.49	....
Nov	140.84	162.10	122.27	75.77	142.97	1,883.65	245.09	3.40	....
Dec	142.12	163.85	121.26	76.07	144.29	1,924.07	248.61	3.38	5.98
1987: Jan	151.17	175.60	126.61	78.54	153.32	2,065.13	264.51	3.17	....
Feb	160.23	189.17	135.49	78.19	158.41	2,202.34	280.93	3.02	....
Mar	166.43	198.95	138.55	77.15	162.41	2,292.61	292.47	2.93	5.18
Apr	163.88	199.03	137.31	72.74	150.52	2,302.64	289.32	2.99	....
May	163.00	198.78	141.30	71.64	145.97	2,291.11	289.12	3.02	....
June	169.58	206.61	150.39	74.25	152.73	2,384.02	301.38	2.92	4.75
July	174.28	214.12	157.48	74.18	152.25	2,481.72	310.09	2.83	....
Aug	184.18	226.49	164.02	78.20	160.94	2,655.01	329.36	2,69	....
Sept	178.39	219.52	158.58	76.13	154.08	2,570.80	318.66	2.78	4.92
Oct	157.13	189.86	140.95	73.27	137.35	2,224.59	280.16	3.25	....
Nov	137.21	163.42	117.57	69.86	118.30	1,931.86	245.01	3.66	....
Dec	134.88	162.19	115.85	67.39	111.47	1,910.07	240.96	3.71	....

[1] Averages of daily closing prices, except New York Stock Exchange data through May 1964 are averages of weekly closing prices.

[2] Includes all the stocks (more than 1,500) listed on the New York Stock Exchange.

[3] Includes 30 stocks.

[4] Includes 500 stocks.

[5] Standard & Poor's series, based on 500 stocks in the composite index.

[6] Aggregate cash dividends (based on latest known annual rate) divided by aggregate market value based on Wednesday closing prices. Monthly data are averages of weekly figures; annual data are averages of monthly figures.

[7] Quarterly data are ratio of earnings (after taxes) for 4 quarters ending with particular quarter to price index for last day of that quarter. Annual ratios are averages of quarterly ratios.

Note.—All data relate to stocks listed on the New York Stock Exchange.

Sources: New York Stock Exchange, Dow Jones & Co., Inc., and Standard & Poor's Corporation.

TABLE B–95.—*Business formation and business failures, 1945–87*

Year or month	Index of net business formation (1967=100)	New business incorporations (number)	Business failures [1]						
			Business failure rate [2]	Number of failures			Amount of current liabilities (millions of dollars)		
				Total	Liability size class		Total	Liability size class	
					Under $100,000	$100,000 and over		Under $100,000	$100,000 and over
1945	...	...	4.2	809	759	50	30.2	11.4	18.8
1946	...	132,916	5.2	1,129	1,003	126	67.3	15.7	51.6
1947	...	112,897	14.3	3,474	3,103	371	204.6	63.7	140.9
1948	101.1	96,346	20.4	5,250	4,853	397	234.6	93.9	140.7
1949	83.7	85,640	34.4	9,246	8,708	538	308.1	161.4	146.7
1950	87.7	93,092	34.3	9,162	8,746	416	248.3	151.2	97.1
1951	86.7	83,778	30.7	8,058	7,626	432	259.5	131.6	128.0
1952	90.8	92,946	28.7	7,611	7,081	530	283.3	131.9	151.4
1953	89.7	102,706	33.2	8,862	8,075	787	394.2	167.5	226.6
1954	88.8	117,411	42.0	11,086	10,226	860	462.6	211.4	251.2
1955	96.6	139,915	41.6	10,969	10,113	856	449.4	206.4	243.0
1956	94.6	141,163	48.0	12,686	11,615	1,071	562.7	239.8	322.9
1957	90.3	137,112	51.7	13,739	12,547	1,192	615.3	267.1	348.2
1958	90.2	150,781	55.9	14,964	13,499	1,465	728.3	297.6	430.7
1959	97.9	193,067	51.8	14,053	12,707	1,346	692.8	278.9	413.9
1960	94.5	182,713	57.0	15,445	13,650	1,795	938.6	327.2	611.4
1961	90.8	181,535	64.4	17,075	15,006	2,069	1,090.1	370.1	720.0
1962	92.6	182,057	60.8	15,782	13,772	2,010	1,213.6	346.5	867.1
1963	94.4	186,404	56.3	14,374	12,192	2,182	1,352.6	321.0	1,031.6
1964	98.2	197,724	53.2	13,501	11,346	2,155	1,329.2	313.6	1,015.6
1965	99.8	203,897	53.3	13,514	11,340	2,174	1,321.7	321.7	1,000.0
1966	99.3	200,010	51.6	13,061	10,833	2,228	1,385.7	321.5	1,064.1
1967	100.0	206,569	49.0	12,364	10,144	2,220	1,265.2	297.9	967.3
1968	108.3	233,635	38.6	9,636	7,829	1,807	941.0	241.1	699.9
1969	115.8	274,267	37.3	9,154	7,192	1,962	1,142.1	231.3	910.8
1970	108.8	264,209	43.8	10,748	8,019	2,729	1,887.8	269.3	1,618.4
1971	111.1	287,577	41.7	10,326	7,611	2,715	1,916.9	271.3	1,645.6
1972	119.3	316,601	38.3	9,566	7,040	2,526	2,000.2	258.8	1,741.5
1973	119.1	329,358	36.4	9,345	6,627	2,718	2,298.6	235.6	2,063.0
1974	113.2	319,149	38.4	9,915	6,733	3,182	3,053.1	256.9	2,796.3
1975	109.9	326,345	42.6	11,432	7,504	3,928	4,380.2	298.6	4,081.6
1976	120.4	375,766	34.8	9,628	6,176	3,452	3,011.3	257.8	2,753.4
1977	130.8	436,170	28.4	7,919	4,861	3,058	3,095.3	208.3	2,887.0
1978	138.1	478,019	23.9	6,619	3,712	2,907	2,656.0	164.7	2,491.3
1979	138.3	524,565	27.8	7,564	3,930	3,634	2,667.4	179.9	2,487.5
1980	129.9	533,520	42.1	11,742	5,682	6,060	4,635.1	272.5	4,362.6
1981	124.8	581,242	61.3	16,794	8,233	8,561	6,955.2	405.8	6,549.3
1982	116.4	566,942	89.0	24,908	11,509	13,399	15,610.8	541.7	15,069.1
1983	117.5	600,400	110.0	31,334	15,509	15,825	16,072.9	635.1	15,437.8
1984	121.3	634,991	107.0	52,078	19,618	32,460	29,268.6	409.8	28,858.8
1985	120.9	662,047	115.0	57,253	36,551	20,702	36,808.8	790.8	36,018.0
1986	120.4	702,601	120.0	61,616	38,908	22,708	44,724.0	838.3	43,885.7
1987	121.4	...	102.0	61,209	39,091	22,118	36,337.1	756.7	35,580.4
	Seasonally adjusted								
1986: Jan	119.3	57,636	...	5,585	3,551	2,034	3,248.0	79.4	3,168.6
Feb	120.8	59,114	...	4,866	3,074	1,792	3,890.1	65.7	3,824.4
Mar	121.5	58,870	...	5,008	3,189	1,819	2,801.7	66.3	2,735.4
Apr	122.4	59,156	...	4,998	3,111	1,887	3,036.2	68.0	2,968.2
May	120.7	57,747	...	5,877	3,664	2,213	3,572.8	79.5	3,493.3
June	120.3	57,446	...	4,813	3,027	1,786	3,467.6	64.6	3,403.0
July	120.7	57,717	...	5,434	3,486	1,948	7,464.7	77.3	7,387.5
Aug	119.3	56,299	...	4,780	3,058	1,722	2,748.4	66.1	2,682.3
Sept	120.4	57,942	...	4,472	2,869	1,603	5,126.6	62.3	5,064.3
Oct	119.7	57,081	...	6,192	3,952	2,240	2,870.8	83.2	2,787.6
Nov	118.3	56,719	...	4,676	3,032	1,644	2,170.2	62.5	2,107.7
Dec	121.9	68,087	...	4,915	3,118	1,797	4,326.8	63.4	4,263.4
1987: Jan	118.1	55,014	...	5,312	3,257	2,055	3,349.8	65.4	3,284.4
Feb	121.4	59,385	...	5,428	3,429	1,999	3,636.6	71.0	3,565.6
Mar	123.8	60,920	...	5,635	3,539	2,096	3,155.3	70.5	3,084.8
Apr	122.3	58,272	...	5,378	3,359	2,019	2,900.6	64.4	2,836.2
May	119.7	56,112	...	6,376	3,985	2,391	2,964.1	74.1	2,890.0
June	119.9	57,234	...	4,969	3,177	1,792	3,116.6	58.8	3,057.8
July	119.6	57,145	...	5,528	3,635	1,893	2,127.8	67.8	2,060.0
Aug	121.2	57,888	...	4,438	2,912	1,526	1,928.4	54.2	1,874.2
Sept	122.7	56,773	...	4,317	2,857	1,460	2,859.2	57.9	2,801.3
Oct	120.7	55,006	...	5,300	3,519	1,781	3,133.1	68.0	3,065.1
Nov	123.2	57,358	...	4,086	2,663	1,423	1,649.3	51.2	1,598.1
Dec	124.6	...	...	4,442	2,921	1,521	5,516.3	53.4	5,462.9

[1] Commercial and industrial failures only through 1983, excluding failures of banks, railroads, real estate, insurance, holding, and financial companies, steamship lines, travel agencies, etc.

Data for 1984–87 based on expanded coverage and new methodology and are therefore not generally comparable with earlier data. Data for 1987 are subject to revision due to amended court filings.

[2] Failure rate per 10,000 listed enterprises.

Sources: Department of Commerce (Bureau of Economic Analysis) and The Dun & Bradstreet Corporation.

AGRICULTURE

Table B–96.—*Farm income, 1929–87*

[Billions of dollars; quarterly data at seasonally adjusted annual rates]

Year or quarter	Income of farm operators from farming							
	Gross farm income					Production expenses	Net farm income	
	Total[1]	Cash marketing receipts			Value of inventory changes[2]		Current dollars	1982 dollars[3]
		Total	Livestock and products	Crops				
1929	13.8	11.3	6.2	5.1	−0.1	7.7	6.2	42.1
1933	6.9	5.3	2.8	2.5	−.2	4.4	2.6	22.8
1939	10.7	7.9	4.5	3.3	.1	6.3	4.4	34.8
1940	11.3	8.4	4.9	3.5	.3	6.9	4.5	34.5
1941	14.3	11.1	6.5	4.6	.4	7.8	6.5	47.0
1942	19.9	15.6	9.0	6.5	1.1	10.0	9.9	67.0
1943	23.3	19.6	11.5	8.1	−.1	11.6	11.7	77.7
1944	24.0	20.5	11.4	9.2	−.4	12.3	11.7	76.5
1945	25.4	21.7	12.0	9.7	−.4	13.1	12.3	78.4
1946	29.6	24.8	13.8	11.0	.0	14.5	15.1	77.7
1947	32.4	29.6	16.5	13.1	−1.8	17.0	15.4	69.5
1948	36.5	30.2	17.1	13.1	1.7	18.8	17.7	74.8
1949	30.8	27.8	15.4	12.4	−.9	18.0	12.8	54.4
1950	33.1	28.5	16.1	12.4	.8	19.5	13.6	57.1
1951	38.3	32.9	19.6	13.2	1.2	22.3	15.9	63.5
1952	37.8	32.5	18.2	14.3	.9	22.8	15.0	58.7
1953	34.4	31.0	16.9	14.1	−.6	21.5	13.0	50.1
1954	34.2	29.8	16.3	13.6	.5	21.8	12.4	47.0
1955	33.5	29.5	16.0	13.5	.2	22.2	11.3	41.6
1956	34.0	30.4	16.4	14.0	−.5	22.7	11.3	40.1
1957	34.8	29.7	17.4	12.3	.6	23.7	11.1	38.1
1958	39.0	33.5	19.2	14.2	.8	25.8	13.2	44.3
1959	37.9	33.6	18.9	14.7	.0	27.2	10.7	35.2
1960	38.6	34.0	19.0	15.0	.4	27.4	11.2	36.3
1961	40.5	35.2	19.5	15.7	.3	28.6	12.0	38.3
1962	42.3	36.5	20.2	16.3	.6	30.3	12.1	37.8
1963	43.4	37.5	20.0	17.4	.6	31.6	11.8	36.3
1964	42.3	37.3	19.9	17.4	−.8	31.8	10.5	31.9
1965	46.5	39.4	21.9	17.5	1.0	33.6	12.9	38.2
1966	50.5	43.4	25.0	18.4	−.1	36.5	14.0	39.9
1967	50.5	42.8	24.4	18.4	.7	38.2	12.3	34.4
1968	51.8	44.2	25.5	18.7	.1	39.5	12.3	32.7
1969	56.4	48.2	28.6	19.6	.1	42.1	14.3	35.9
1970	58.8	50.5	29.5	21.0	.0	44.5	14.4	34.2
1971	62.1	52.7	30.5	22.3	1.4	47.1	15.0	33.8
1972	71.1	61.1	35.6	25.5	.9	51.7	19.5	41.8
1973	98.9	86.9	45.8	41.1	3.4	64.6	34.4	69.4
1974	98.2	92.4	41.3	51.1	−1.6	71.0	27.3	50.5
1975	100.6	88.9	43.1	45.8	3.4	75.0	25.5	43.1
1976	102.9	95.4	46.3	49.0	−1.5	82.7	20.2	32.0
1977	108.8	96.2	47.6	48.6	1.1	88.9	19.9	29.5
1978	128.4	112.4	59.2	53.2	1.9	103.2	25.2	34.9
1979	150.7	131.5	69.2	62.3	5.0	123.3	27.4	34.9
1980	149.3	139.7	68.0	71.7	−6.3	133.1	16.1	18.8
1981	166.3	141.6	69.2	72.5	6.5	139.4	26.9	28.6
1982	163.5	142.6	70.3	72.3	−1.4	140.0	23.5	23.5
1983	153.1	136.6	69.4	67.1	−10.9	140.4	12.7	12.2
1984	174.7	142.3	72.9	69.4	6.2	142.7	32.0	29.7
1985	166.0	144.2	69.8	74.4	−2.7	133.7	32.3	29.0
1986	159.5	135.2	71.6	63.6	−3.3	122.1	37.5	32.9
1985: I	168.5	137.9	69.9	68.0	1.1	138.3	30.2	27.5
II	164.0	138.0	69.0	68.9	−2.4	135.3	28.7	25.9
III	159.5	144.8	68.9	76.0	−4.2	132.2	27.3	24.5
IV	172.1	156.1	71.4	84.7	−5.1	129.0	43.1	38.4
1986: I	149.8	134.4	68.3	66.0	−4.2	125.7	24.1	21.4
II	168.8	130.6	66.8	63.8	−3.5	122.9	45.9	40.3
III	154.7	135.0	77.8	57.2	−3.0	120.6	34.2	29.8
IV	164.8	140.7	73.3	67.4	−2.4	119.0	45.8	39.9
1987: I	167.3	130.0	72.6	57.4	−2.0	117.9	49.4	42.5
II	153.7	128.1	72.0	56.1	−1.7	117.0	36.6	31.2
III	157.7	137.3	78.7	58.6	−.9	118.5	39.3	33.3

[1] Cash marketing receipts and inventory changes plus Government payments, other farm cash income, and nonmoney income furnished by farms.

[2] Physical changes in end-of-period inventory of crop and livestock commodities valued at average prices during the period.

[3] Income in current dollars divided by the GNP implicit price deflator (Department of Commerce).

Note.—Data include net Commodity Credit Corporation loans and operator households.

Source: Department of Agriculture, except as noted.

TABLE B-97.—*Farm output and productivity indexes, 1947–86*

[1977=100]

Year	Farm output						Productivity indicators				
	Total [1]	Crops [2]				Livestock and products [2]	Farm output per unit of total input	Crop production per acre [4]	Farm output per hour of farm work		
		Total [3]	Feed grains	Food grains	Oil crops				Total	Crops	Livestock and products
1947	58	56	39	64	22	65	55	57	16	18	17
1948	63	64	57	62	27	64	60	64	18	20	18
1949	62	61	50	53	26	67	57	60	19	20	18
1950	61	59	51	49	26	70	58	59	19	22	19
1951	63	60	47	49	26	73	60	59	20	22	20
1952	66	62	50	63	26	74	62	62	22	24	21
1953	66	62	49	57	26	74	64	62	23	25	22
1954	66	61	51	51	28	77	65	61	24	26	23
1955	69	63	54	48	30	79	66	63	26	28	24
1956	69	63	54	50	34	79	67	64	28	30	25
1957	67	62	58	47	33	78	67	65	29	33	26
1958	73	69	64	69	39	79	74	73	33	38	28
1959	74	68	66	55	36	83	73	72	35	37	31
1960	76	72	69	66	38	82	76	77	37	41	32
1961	76	70	62	60	43	86	78	78	39	42	35
1962	77	71	62	56	44	86	78	81	41	45	37
1963	80	74	68	59	46	89	82	83	45	47	40
1964	79	72	59	65	46	91	81	81	47	49	43
1965	82	76	70	67	53	89	84	85	52	56	45
1966	79	73	70	67	55	91	83	83	53	59	49
1967	83	77	79	76	56	94	85	86	58	63	53
1968	85	79	75	80	64	94	87	89	62	66	55
1969	85	80	78	74	65	95	88	91	63	68	59
1970	84	77	71	69	66	99	87	88	66	70	64
1971	92	86	92	81	68	100	95	96	74	79	68
1972	91	87	88	77	74	101	94	99	78	84	73
1973	93	92	91	86	87	99	95	99	81	87	76
1974	88	84	74	91	71	100	90	88	79	80	82
1975	95	93	91	108	86	95	99	96	89	89	85
1976	97	92	96	107	74	99	98	94	94	91	93
1977	100	100	100	100	100	100	100	100	100	100	100
1978	104	102	108	93	105	101	101	105	108	105	109
1979	111	113	116	108	129	104	105	113	119	118	117
1980	104	101	97	121	99	108	101	100	113	105	129
1981	118	117	121	144	114	109	116	115	131	121	136
1982	116	117	122	138	121	107	118	116	133	124	143
1983	96	88	67	117	91	109	99	100	122	105	154
1984	112	111	116	129	106	107	118	112	138	123	162
1985	118	118	134	121	117	110	128	120	151	134	175
1986	111	109	123	107	110	110	127	116	150	133	183

---

[1] Farm output measures the annual volume of net farm production available for eventual human use through sales from farms or consumption in farm households.

[2] Gross production.

[3] Includes items not included in groups shown.

[4] Computed from variable weights for individual crops produced each year.

Source: Department of Agriculture.

TABLE B–98.—*Farm input use, selected inputs, 1947–86*

Year	Farm population April[1]		Farm employment (thousands)[3]			Crops harvested (millions of acres)[4]	Selected indexes of input use (1977=100)					
	Number (thousands)	As percent of total population[2]	Total	Family workers	Hired workers		Total	Farm labor	Farm real estate	Mechanical power and machinery	Agricultural chemicals[5]	Feed, seed, and livestock purchases[6]
1947	25,829	17.9	10,382	8,115	2,267	355	104	297	106	54	15	51
1948	24,383	16.6	10,363	8,026	2,337	356	104	285	107	62	16	52
1949	24,194	16.2	9,964	7,712	2,252	360	108	285	108	68	18	56
1950	23,048	15.2	9,926	7,597	2,329	345	106	265	109	72	19	58
1951	21,890	14.2	9,546	7,310	2,236	344	106	251	109	77	21	62
1952	21,748	13.9	9,149	7,005	2,144	349	105	237	108	81	23	63
1953	19,874	12.5	8,864	6,775	2,089	348	103	220	108	82	24	63
1954	19,019	11.7	8,651	6,570	2,081	346	102	214	108	82	24	65
1955	19,078	11.5	8,381	6,345	2,036	340	104	220	108	83	26	66
1956	18,712	11.1	7,852	5,900	1,952	324	103	212	106	84	27	69
1957	17,656	10.3	7,600	5,660	1,940	324	100	196	105	83	27	68
1958	17,128	9.8	7,503	5,521	1,982	324	98	182	104	83	28	73
1959	16,592	9.3	7,342	5,390	1,952	324	101	183	105	84	32	77
1960	15,635	8.7	7,057	5,172	1,885	324	99	177	103	83	32	77
1961	14,803	8.1	6,919	5,029	1,890	302	98	167	103	80	35	81
1962	14,313	7.7	6,700	4,873	1,827	295	98	163	104	80	38	83
1963	13,367	7.1	6,518	4,738	1,780	298	98	155	104	79	43	83
1964	12,954	6.7	6,110	4,506	1,604	298	98	148	104	80	46	85
1965	12,363	6.4	5,610	4,128	1,482	298	97	144	103	80	49	86
1966	11,595	5.9	5,214	3,854	1,360	294	96	132	102	82	56	89
1967	10,875	5.5	4,903	3,650	1,253	306	98	128	104	85	66	92
1968	10,454	5.2	4,749	3,535	1,213	300	97	124	102	86	69	89
1969	10,307	5.1	4,596	3,419	1,176	290	96	118	102	86	73	93
1970	9,712	4.7	4,523	3,348	1,175	293	96	112	105	85	75	96
1971	9,425	4.5	4,436	3,275	1,161	305	97	108	103	87	81	102
1972	9,610	4.6	4,373	3,228	1,146	294	97	110	102	86	86	104
1973	9,472	4.5	4,337	3,169	1,168	321	98	109	100	90	90	107
1974	9,264	4.3	4,389	3,075	1,314	328	98	109	99	92	92	99
1975	8,864	4.1	4,342	3,026	1,317	336	97	106	97	96	83	93
1976	8,253	3.8	4,374	2,997	1,377	337	98	100	98	98	96	101
1977	[7] 6,194	[7] 2.8	4,155	2,859	1,296	345	100	100	100	100	100	100
1978	[7] 6,501	[7] 2.9	3,957	2,689	1,268	338	102	100	100	104	107	108
1979	[7] 6,241	[7] 2.8	3,774	2,501	1,273	348	105	99	103	104	123	115
1980	[7] 6,051	[7] 2.7	3,705	2,402	1,303	352	103	96	103	101	123	114
1981	[7] 5,790	[7] 2.5	[8] 3,552	[8] 2,267	[8] 1,285	366	102	96	104	98	129	108
1982	[7] 5,620	[7] 2.4	3,400	2,136	1,264	362	99	93	102	92	118	107
1983	[7] 5,787	[7] 2.5	3,247	2,007	1,240	306	97	97	101	89	105	109
1984	5,754	2.4	3,094	1,880	1,214	348	95	92	97	85	121	105
1985	5,355	2.2	2,941	1,764	[9] 1,177	342	92	85	95	81	121	105
1986	5,226	2.2	2,749	1,641	[9] 1,108	325	87	80	93	76	109	102

---

[1] Farm population as defined by Department of Agriculture and Department of Commerce, i.e., civilian population living on farms in rural areas, regardless of occupation. See also footnote 7.

[2] Total population of United States including Armed Forces overseas, as of July 1.

[3] Includes persons doing farmwork on all farms. These data, published by the Department of Agriculture, differ from those on agricultural employment by the Department of Labor (see Table B–32) because of differences in the method of approach, in concepts of employment, and in time of month for which the data are collected.

[4] Acreage harvested plus acreages in fruits, tree nuts, and farm gardens.

[5] Fertilizer, lime, and pesticides.

[6] Nonfarm constant dollar value of feed, seed, and livestock purchases.

[7] Based on new definition of a farm. Under old definition of a farm, farm population (in thousands and as percent of total population) for 1977, 1978, 1979, 1980, 1981, 1982, and 1983 is 7,806 and 3.6; 8,005 and 3.6; 7,553 and 3.4; 7,241 and 3.2; 6,942 and 3.0; 6,870 and 3.0; 7,029 and 3.0, respectively.

[8] Basis for farm employment series was discontinued for 1981 through 1984. Employment is estimated for these years.

[9] Includes agricultural service workers working on farms.

Note.—Population includes Alaska and Hawaii beginning 1960.

Sources: Department of Agriculture and Department of Commerce (Bureau of the Census).

TABLE B–99.—*Indexes of prices received and prices paid by farmers, 1946–87*

[1977=100]

Year or month	Prices received by farmers			Prices paid by farmers						Addendum: Average farm real estate value per acre[3]
	All farm products	Crops	Livestock and products	All commodities, services, interest, taxes, and wage rates[1]	Production items				Wage rates	
					Total[2]	Tractors and self-propelled machinery	Fertilizer	Fuels and energy		
1946	52	53	50	30	33	....	45	....	20	11
1947	60	61	60	35	39	....	50	....	22	13
1948	63	59	65	38	43	....	55	....	23	14
1949	55	52	56	36	41	....	56	....	22	14
1950	56	54	58	37	42	....	54	....	22	14
1951	66	61	70	41	47	....	57	....	25	16
1952	63	62	64	42	47	....	59	....	26	18
1953	56	55	56	40	44	....	59	....	27	18
1954	54	56	52	40	44	....	59	....	27	18
1955	51	53	49	40	43	....	58	....	27	19
1956	50	54	47	40	43	....	57	....	28	19
1957	51	52	51	42	44	....	58	....	29	21
1958	55	52	57	43	46	....	58	....	30	22
1959	53	51	53	43	46	....	57	....	32	23
1960	52	51	53	44	46	....	57	....	33	24
1961	53	52	52	44	46	....	58	....	33	25
1962	53	54	53	45	47	....	58	....	34	26
1963	53	55	51	45	47	....	57	....	35	27
1964	52	55	49	45	47	....	57	....	36	29
1965	54	53	54	47	48	39	57	49	38	31
1966	58	55	60	49	50	40	56	49	41	33
1967	55	52	57	49	50	42	55	50	44	35
1968	56	52	60	51	50	44	52	50	48	38
1969	59	50	67	53	52	47	48	51	53	40
1970	60	52	67	55	54	49	48	52	57	42
1971	62	56	67	58	57	51	50	53	59	43
1972	69	60	77	62	61	54	52	54	63	47
1973	98	91	104	71	73	58	56	57	69	53
1974	105	117	94	81	83	68	92	79	79	66
1975	101	105	98	89	91	82	120	88	85	75
1976	102	102	101	95	97	91	102	93	93	86
1977	100	100	100	100	100	100	100	100	100	100
1978	115	105	124	108	108	109	100	105	107	109
1979	132	116	147	123	125	122	108	137	117	125
1980	134	125	144	138	138	136	134	188	126	145
1981	139	134	143	150	148	152	144	213	137	158
1982	133	121	145	159	153	165	144	210	144	157
1983	135	128	141	161	152	174	137	202	148	148
1984	142	138	146	165	155	181	143	201	151	146
1985	128	120	136	163	151	178	135	201	154	128
1986	123	107	138	159	144	174	124	162	160	112
1987	127	106	146	162	147	174	118	161	167	103
1986: Jan	124	113	135	161	148	174	128	199	150	....
Feb	122	111	133	161	147	174	128	184	150	112
Mar	122	111	132	....	....	....	....	....	....	....
Apr	120	113	127	159	144	175	125	157	164	....
May	123	114	131	....	....	....	....	....	....	....
June	122	109	134	....	....	....	....	....	....	....
July	126	107	143	159	143	175	125	152	166	....
Aug	126	103	148	....	....	....	....	....	....	....
Sept	123	99	146	....	....	....	....	....	....	....
Oct	122	99	145	158	142	172	116	150	159	....
Nov	124	101	145	....	....	....	....	....	....	....
Dec	120	98	141	....	....	....	....	....	....	....
1987: Jan	121	100	142	158	142	172	116	153	159	....
Feb	122	99	144	....	....	....	....	....	....	103
Mar	121	100	142	....	....	....	....	....	....	....
Apr	125	101	147	162	147	174	117	159	171	....
May	128	108	148	....	....	....	....	....	....	....
June	130	110	150	....	....	....	....	....	....	....
July	129	108	149	164	148	174	117	165	174	....
Aug	127	103	151	....	....	....	....	....	....	....
Sept	129	104	152	....	....	....	....	....	....	....
Oct	127	106	147	165	150	176	121	168	162	....
Nov	132	120	143	....	....	....	....	....	....	....
Dec	127	113	141	....	....	....	....	....	....	....

[1] Includes items used for family living, not shown separately.

[2] Includes other items not shown separately.

[3] Average for 48 States. Annual data are for March 1 of each year through 1975, for February 1 for 1976–81, for April 1 for 1982–85, and for February 1 for 1986–87.

Source: Department of Agriculture.

TABLE B–100.—*U.S. exports and imports of agricultural commodities, 1940–87*

[Billions of dollars]

Year	Exports							Imports					Agricultural trade balance
	Total [1]	Feed grains	Food grains [2]	Oilseeds and products	Cotton	Tobacco	Animals and products	Total [1]	Crops, fruits, and vegetables [3]	Animals and products	Coffee	Cocoa beans and products	
1940	0.5	(4)	(4)	(4)	0.2	(4)	0.1	1.3	(4)	0.2	0.1	(4)	−0.8
1941	.7	(4)	0.1	(4)	.1	0.1	.3	1.7	0.1	.3	.2	(4)	−1.0
1942	1.2	(4)	(4)	(4)	.1	.1	.8	1.3	(4)	.5	.2	(4)	−.1
1943	2.1	(4)	.1	0.1	.2	.2	1.2	1.5	.1	.4	.3	(4)	.6
1944	2.1	(4)	.1	.1	.1	.1	1.3	1.8	.1	.3	.3	(4)	.3
1945	2.3	(4)	.4	(4)	.3	.2	.9	1.7	.1	.4	.3	(4)	.5
1946	3.1	0.1	.7	(4)	.5	.4	.9	2.3	.2	.4	.5	0.1	.8
1947	4.0	.4	1.4	.1	.4	.3	.7	2.8	.1	.4	.6	.2	1.2
1948	3.5	.1	1.5	.2	.5	.2	.5	3.1	.2	.6	.7	.2	.3
1949	3.6	.3	1.1	.3	.9	.3	.4	2.9	.2	.4	.8	.1	.7
1950	2.9	.2	.6	.2	1.0	.3	.3	4.0	.2	.7	1.1	.2	−1.1
1951	4.0	.3	1.1	.3	1.1	.3	.5	5.2	.2	1.1	1.4	.2	−1.1
1952	3.4	.3	1.1	.2	.9	.2	.3	4.5	.2	.7	1.4	.2	−1.1
1953	2.8	.3	.7	.2	.5	.3	.4	4.2	.2	.6	1.5	.2	−1.3
1954	3.1	.2	.5	.3	.8	.3	.5	4.0	.2	.5	1.5	.3	−.9
1955	3.2	.3	.6	.4	.5	.4	.6	4.0	.2	.5	1.4	.2	−.8
1956	4.2	.4	1.0	.5	.7	.3	.7	4.0	.2	.4	1.4	.2	.2
1957	4.5	.3	1.0	.5	1.0	.4	.7	4.0	.2	.5	1.4	.2	.6
1958	3.9	.5	.8	.4	.7	.4	.5	3.9	.2	.7	1.2	.2	(4)
1959	4.0	.6	.9	.6	.4	.3	.6	4.1	.2	.8	1.1	.2	−.1
1960	4.8	.5	1.2	.6	1.0	.4	.6	3.8	.2	.6	1.0	.2	1.0
1961	5.0	.5	1.4	.6	.9	.4	.6	3.7	.2	.7	1.0	.2	1.3
1962	5.0	.8	1.3	.7	.5	.4	.6	3.9	.2	.9	1.0	.2	1.2
1963	5.6	.8	1.5	.8	.6	.4	.7	4.0	.3	.9	1.0	.2	1.6
1964	6.3	.9	1.7	1.0	.7	.4	.8	4.1	.3	.8	1.2	.2	2.3
1965	6.2	1.1	1.4	1.2	.5	.4	.8	4.1	.3	.9	1.1	.1	2.1
1966	6.9	1.3	1.8	1.2	.4	.5	.7	4.5	.4	1.2	1.1	.1	2.4
1967	6.4	1.1	1.5	1.3	.5	.5	.7	4.5	.4	1.1	1.0	.2	1.9
1968	6.3	.9	1.4	1.3	.5	.5	.7	5.0	.5	1.3	1.2	.2	1.3
1969	6.0	.9	1.2	1.3	.3	.6	.8	5.0	.5	1.4	.9	.2	1.1
1970	7.3	1.1	1.4	1.9	.4	.5	.9	5.8	.5	1.6	1.2	.3	1.5
1971	7.7	1.0	1.3	2.2	.6	.5	1.0	5.8	.6	1.5	1.2	.2	1.9
1972	9.4	1.5	1.8	2.4	.5	.7	1.1	6.5	.7	1.8	1.3	.2	2.9
1973	17.7	3.5	4.7	4.3	.9	.7	1.6	8.4	.8	2.6	1.7	.3	9.3
1974	21.9	4.6	5.4	5.7	1.3	.8	1.8	10.2	.8	2.2	1.6	.5	11.7
1975	21.9	5.2	6.2	4.5	1.0	.9	1.7	9.3	.8	1.8	1.7	.5	12.6
1976	23.0	6.0	4.7	5.1	1.0	.9	2.4	11.0	.9	2.3	2.9	.6	12.0
1977	23.6	4.9	3.6	6.6	1.5	1.1	2.7	13.4	1.2	2.3	4.2	1.0	10.2
1978	29.4	5.9	5.5	8.2	1.7	1.4	3.0	14.8	1.5	3.1	4.0	1.4	14.6
1979	34.7	7.7	6.3	8.9	2.2	1.2	3.8	16.7	1.7	3.9	4.2	1.2	18.0
1980	41.2	9.8	7.9	9.4	2.9	1.3	3.8	17.4	1.6	3.8	4.2	.9	23.9
1981	43.3	9.4	9.6	9.6	2.3	1.5	4.2	16.8	2.0	3.5	2.9	.9	26.6
1982	36.6	6.4	7.9	9.1	2.0	1.5	3.9	15.4	2.3	3.7	2.9	.7	21.2
1983	36.1	7.3	7.4	8.7	1.8	1.5	3.8	16.6	2.3	3.8	2.8	.8	19.5
1984	37.8	8.1	7.5	8.4	2.4	1.5	4.2	19.3	3.1	4.1	3.3	1.1	18.5
1985	29.0	6.0	4.5	5.8	1.6	1.5	4.1	20.0	3.5	4.2	3.3	1.4	9.1
1986	26.0	3.1	3.8	6.5	.8	1.2	4.5	21.1	3.5	4.5	4.5	1.1	4.9
Jan–Nov:													
1986	23.5	2.8	3.6	5.8	.6	1.0	4.1	19.5	3.3	4.1	4.3	1.0	4.0
1987	25.7	3.5	3.4	5.7	1.4	.9	4.7	18.7	3.3	4.5	2.7	1.0	7.0

[1] Total includes items not shown separately.

[2] Rice, wheat, and wheat flour.

[3] Includes nuts, fruits, and vegetable preparations.

[4] Less than $50 million.

Note.—Data derived from official estimates released by the Bureau of the Census, Department of Commerce. Agricultural commodities are defined as (1) nonmarine food products and (2) other products of agriculture which have not passed through complex processes of manufacture. Export value, at U.S. port of exportation, is based on the selling price and includes inland freight, insurance, and other charges to the port. Import value, defined generally as the market value in the foreign country, excludes import duties, ocean freight, and marine insurance.

Source: Department of Agriculture.

TABLE B–101.—*Balance sheet of the farm sector, 1939–87*

[Billions of dollars]

End of year	Assets									Claims			
	Total	Real estate	Livestock [1]	Other physical assets			Financial assets			Total	Real estate debt [3]	Non-real estate debt [4]	Proprietors' equities
				Machinery and motor vehicles	Crops [2]	Household equipment and furnishings	Deposits and currency	U.S. savings bonds	Investments in cooperatives				
1939	52.6	33.6	5.1	3.1	2.2	4.2	3.2	0.3	0.8	52.6	6.6	3.0	43.0
1940	53.7	34.0	5.3	3.3	2.3	4.1	3.5	.4	.9	53.7	6.5	3.3	43.8
1941	61.4	36.6	7.1	4.0	3.2	4.8	4.2	.5	.9	61.4	6.4	3.5	51.5
1942	72.9	41.5	9.6	4.9	4.3	4.8	5.4	1.1	1.0	72.9	6.0	3.2	63.7
1943	82.9	47.7	9.7	5.4	5.5	4.7	6.6	2.2	1.1	82.9	5.4	2.9	74.5
1944	92.1	52.9	9.0	6.5	6.0	5.2	7.9	3.4	1.2	92.1	4.9	2.7	84.4
1945	102.0	60.5	9.7	5.4	6.0	5.5	9.4	4.2	1.4	102.0	4.8	2.9	94.4
1946	116.1	68.7	11.9	5.3	7.0	7.2	10.2	4.2	1.5	116.1	4.9	3.5	107.8
1947	127.1	73.5	13.3	7.4	8.9	8.1	9.9	4.4	1.7	127.1	5.1	4.1	118.0
1948	132.9	76.0	14.4	10.1	7.4	8.9	9.6	4.6	1.9	132.9	5.3	4.9	122.7
1949	130.3	75.1	12.9	12.2	5.9	8.4	9.1	4.7	2.1	130.3	5.6	5.2	119.5
1950	152.9	88.9	17.1	14.1	7.1	9.6	9.1	4.7	2.3	152.9	6.1	6.1	140.7
1951	169.8	98.7	19.5	16.7	8.2	10.1	9.4	4.7	2.5	169.8	6.7	7.4	155.7
1952	166.3	100.0	14.8	17.4	7.9	9.5	9.4	4.6	2.7	166.3	7.3	7.7	151.4
1953	162.3	98.9	11.7	18.4	6.8	9.5	9.4	4.7	2.9	162.3	7.8	6.8	147.8
1954	167.0	102.5	11.2	18.7	7.5	9.7	9.4	5.0	3.0	167.0	8.3	7.2	151.5
1955	172.5	108.2	10.6	19.3	6.5	10.0	9.5	5.2	3.2	172.5	9.0	7.9	155.6
1956	181.6	116.1	11.0	20.2	6.8	9.6	9.4	5.1	3.5	181.6	9.9	8.0	163.8
1957	191.0	122.7	13.9	20.1	6.4	9.6	9.5	5.1	3.7	191.0	10.4	8.8	171.8
1958	206.4	131.5	17.7	21.8	6.9	9.4	10.0	5.2	3.9	206.4	11.1	10.1	185.2
1959	210.2	138.4	15.2	22.7	6.6	9.2	9.2	4.7	4.2	210.2	12.1	11.5	186.6
1960	210.9	139.9	15.6	22.2	6.7	8.7	8.7	4.6	4.5	210.9	12.9	12.0	186.1
1961	218.9	146.0	16.4	22.5	7.0	8.9	8.8	4.5	4.8	218.9	14.0	12.7	192.2
1962	226.2	150.7	17.3	23.5	7.3	8.8	9.2	4.4	5.0	226.2	15.2	14.2	196.8
1963	234.3	158.9	15.9	23.9	7.9	8.8	9.2	4.2	5.4	234.3	16.9	15.6	201.8
1964	243.3	168.5	14.5	24.8	7.7	8.4	9.6	4.2	5.6	243.3	18.9	16.4	208.0
1965	260.3	180.1	17.6	26.0	8.3	8.4	10.0	4.1	5.9	260.3	21.2	18.1	221.0
1966	274.2	190.2	19.0	27.4	8.9	8.3	10.3	3.9	6.2	274.2	23.1	19.8	231.3
1967	288.0	201.1	18.8	29.8	8.3	8.8	10.9	3.8	6.5	288.0	25.2	20.8	242.0
1968	301.9	210.8	20.2	31.3	8.1	9.4	11.5	3.8	6.8	301.9	27.5	20.4	253.9
1969	312.9	217.1	23.5	32.3	8.4	9.6	11.9	3.7	6.4	312.9	29.4	21.2	262.4
1970	324.0	223.8	23.7	34.4	9.0	10.0	12.4	3.6	7.2	324.0	30.5	22.3	271.2
1971	349.4	240.2	27.3	36.6	9.8	10.8	13.2	3.7	7.9	349.4	32.4	25.1	291.9
1972	393.7	268.6	34.1	39.3	13.0	11.9	14.0	4.0	8.9	393.7	35.4	28.0	330.4
1973	477.7	328.6	42.4	44.2	21.4	12.3	14.9	4.2	9.9	477.7	39.8	33.1	404.9
1974 [5]	510.3	368.7	24.5	53.6	23.0	11.2	14.0	3.8	11.4	510.3	44.9	36.7	428.6
1975	577.0	420.6	29.4	63.1	21.1	11.7	14.5	3.9	12.8	577.0	49.9	41.6	485.5
1976	664.0	499.6	29.0	70.1	21.2	12.1	14.8	3.8	13.2	664.0	55.4	47.8	560.8
1977	731.4	556.4	31.9	76.4	20.6	13.8	15.2	3.9	13.3	731.4	63.9	55.0	612.5
1978	867.7	656.1	51.3	83.3	25.3	16.0	15.5	4.2	15.9	867.7	72.8	63.8	731.2
1979	1,006.9	768.0	61.4	93.2	29.2	17.2	15.9	4.0	18.0	1,006.9	86.8	75.7	844.4
1980	1,102.3	850.8	60.6	99.3	33.0	19.4	16.2	3.8	19.2	1,102.3	97.5	81.2	923.6
1981	1,103.7	851.7	53.5	107.8	29.1	20.8	16.7	3.6	20.4	1,103.7	107.2	88.2	908.2
1982	1,066.4	812.2	53.0	107.9	27.7	23.0	17.4	3.5	21.8	1,066.4	111.3	91.8	863.3
1983	1,050.8	801.8	49.7	106.2	23.7	24.4	18.2	3.6	23.2	1,050.8	113.7	92.7	844.3
1984	949.6	693.7	49.6	102.7	29.6	26.1	19.8	3.7	24.4	949.6	112.4	92.0	745.2
1985	846.5	606.8	46.3	92.4	23.1	27.8	21.1	3.9	25.2	846.5	105.9	82.2	658.5
1986	789.4	554.0	47.6	84.5	18.4	30.5	24.8	4.5	24.9	789.4	95.8	71.0	622.5
1987 p	811.9	576.2	48.5	80.6	18.7	31.7	27.0	4.9	24.4	811.9	89.7	61.9	660.4

[1] Beginning with 1959, horses and mules are excluded.

[2] Non-Commodity Credit Corporation (CCC) crops held on farms plus value above loan rate for crops held under CCC.

[3] Includes CCC storage and drying facilities loans.

[4] Does not include CCC crop loans.

[5] Beginning 1974, data are for farms included in the new farm definition, that is, places with sales of $1,000 or more annually.

Note.—Data include operator households. Beginning 1959, data include Alaska and Hawaii.

Source: Department of Agriculture.

TABLE B–102.—*U.S. international transactions, 1946–87*

[Millions of dollars; quarterly data seasonally adjusted, except as noted. Credits (+), debits (−)]

Year or quarter	Merchandise[1][2]			Investment income[3]			Net military transactions	Net travel and transportation receipts	Other services, net[3]	Balance on goods and services[4]	Remittances, pensions, and other unilateral transfers[1]	Balance on current account[4]
	Exports	Imports	Net	Receipts	Payments	Net						
1946	11,764	−5,067	6,697	772	−212	560	−493	733	310	7,807	−2,922	4,885
1947	16,097	−5,973	10,124	1,102	−245	857	−455	946	145	11,617	−2,625	8,992
1948	13,265	−7,557	5,708	1,921	−437	1,484	−799	374	175	6,942	−4,525	2,417
1949	12,213	−6,874	5,339	1,831	−476	1,355	−621	230	208	6,511	−5,638	873
1950	10,203	−9,081	1,122	2,068	−559	1,509	−576	−120	242	2,177	−4,017	−1,840
1951	14,243	−11,176	3,067	2,633	−583	2,050	−1,270	298	254	4,399	−3,515	884
1952	13,449	−10,838	2,611	2,751	−555	2,196	−2,054	83	309	3,145	−2,531	614
1953	12,412	−10,975	1,437	2,736	−624	2,112	−2,423	−238	307	1,195	−2,481	−1,286
1954	12,929	−10,353	2,576	2,929	−582	2,347	−2,460	−269	305	2,499	−2,280	219
1955	14,424	−11,527	2,897	3,406	−676	2,730	−2,701	−297	299	2,928	−2,498	430
1956	17,556	−12,803	4,753	3,837	−735	3,102	−2,788	−361	447	5,153	−2,423	2,730
1957	19,562	−13,291	6,271	4,180	−796	3,384	−2,841	−189	482	7,107	−2,345	4,762
1958	16,414	−12,952	3,462	3,790	−825	2,965	−3,135	−633	486	3,145	−2,361	784
1959	16,458	−15,310	1,148	4,132	−1,061	3,071	−2,805	−821	573	1,166	−2,448	−1,282
1960	19,650	−14,758	4,892	4,616	−1,237	3,379	−2,752	−964	638	5,191	−2,367	2,824
1961	20,108	−14,537	5,571	4,999	−1,245	3,754	−2,596	−978	732	6,484	−2,662	3,822
1962	20,781	−16,260	4,521	5,618	−1,324	4,294	−2,449	−1,152	911	6,127	−2,740	3,387
1963	22,272	−17,048	5,224	6,157	−1,561	4,596	−2,304	−1,309	1,037	7,244	−2,831	4,414
1964	25,501	−18,700	6,801	6,824	−1,784	5,040	−2,133	−1,146	1,161	9,724	−2,901	6,823
1965	26,461	−21,510	4,951	7,437	−2,088	5,349	−2,122	−1,280	1,480	8,378	−2,948	5,431
1966	29,310	−25,493	3,817	7,528	−2,481	5,047	−2,935	−1,331	1,496	6,095	−3,064	3,031
1967	30,666	−26,866	3,800	8,020	−2,747	5,273	−3,226	−1,750	1,742	5,838	−3,255	2,583
1968	33,626	−32,991	635	9,368	−3,378	5,990	−3,143	−1,548	1,759	3,693	−3,082	611
1969	36,414	−35,807	607	10,912	−4,869	6,043	−3,328	−1,763	1,964	3,524	−3,125	399
1970	42,469	−39,866	2,603	11,747	−5,516	6,231	−3,354	−2,038	2,329	5,773	−3,443	2,331
1971	43,319	−45,579	−2,260	12,707	−5,436	7,271	−2,893	−2,345	2,649	2,423	−3,856	−1,433
1972	49,381	−55,797	−6,416	14,764	−6,572	8,192	−3,420	−3,063	2,965	−1,742	−4,052	−5,795
1973	71,410	−70,499	911	21,808	−9,655	12,153	−2,070	−3,158	3,406	11,244	−4,103	7,140
1974	98,306	−103,811	−5,505	27,587	−12,084	15,503	−1,653	−3,184	4,231	9,392	[5] −7,431	1,962
1975	107,088	−98,185	8,903	25,351	−12,564	12,787	−746	−2,812	4,853	22,984	−4,868	18,116
1976	114,745	−124,228	−9,483	29,286	−13,311	15,975	559	−2,558	5,027	9,521	−5,314	4,207
1977	120,816	−151,907	−31,091	32,179	−14,217	17,962	1,528	−3,565	5,679	−9,488	−5,023	−14,511
1978	142,054	−176,001	−33,947	42,245	−21,680	20,565	621	−3,573	6,459	−9,875	−5,552	−15,427
1979	184,473	−212,009	−27,536	64,132	−32,960	31,172	−1,778	−2,935	6,214	5,138	−6,128	−991
1980	224,269	−249,749	−25,480	72,506	−42,120	30,386	−2,237	−997	7,793	9,466	−7,593	1,873
1981	237,085	−265,063	−27,978	86,411	−52,329	34,082	−1,183	144	9,278	14,344	−7,460	6,884
1982	211,198	−247,642	−36,444	83,549	−54,883	28,666	−274	−992	9,320	278	−8,956	−8,679
1983	201,820	−268,900	−67,080	77,251	−52,376	24,875	−243	−4,227	9,908	−36,766	−9,480	−46,246
1984	219,900	−332,422	−112,522	85,910	−67,419	18,491	−1,942	−8,604	9,741	−94,835	−12,178	−107,013
1985	215,935	−338,083	−122,148	88,299	−62,901	25,398	−3,339	−10,866	9,861	−101,093	−15,301	−116,393
1986	224,361	−368,700	−144,339	88,209	−67,365	20,844	−3,662	−9,903	11,368	−125,694	−15,658	−141,352
1985:												
I	55,064	−79,946	−24,882	18,530	−16,359	2,171	−242	−2,261	2,296	−22,918	−3,296	−26,214
II	54,040	−83,986	−29,946	21,931	−16,670	5,261	−782	−2,849	2,458	−25,858	−3,517	−29,375
III	53,367	−84,573	−31,206	24,174	−16,055	8,119	−794	−2,892	2,403	−24,370	−4,169	−28,539
IV	53,464	−89,578	−36,114	23,665	−13,818	9,847	−1,519	−2,862	2,704	−27,944	−4,321	−32,265
1986:												
I	53,878	−88,856	−34,978	24,076	−17,651	6,425	−1,298	−2,786	2,618	−30,019	−3,021	−33,040
II	56,928	−90,579	−33,651	22,013	−17,426	4,587	−1,054	−2,278	2,808	−29,588	−4,167	−33,755
III	56,534	−93,649	−37,115	21,333	−15,994	5,339	−815	−2,442	2,784	−32,249	−4,334	−36,583
IV	57,021	−95,616	−38,595	20,787	−16,295	4,492	−495	−2,397	3,156	−33,839	−4,138	−37,977
1987:												
I	56,992	−95,749	−38,757	24,950	−19,450	5,500	−37	−3,219	2,832	−33,681	−3,103	−36,784
II	60,097	−99,655	−39,558	22,452	−20,875	1,577	29	−2,779	2,633	−38,098	−3,092	−41,190
III ^{p}	65,263	−105,095	−39,832	22,580	−22,847	−267	−443	−2,922	3,017	−40,447	−2,931	−43,378

---

[1] Excludes military.

[2] Adjusted from Census data for differences in valuation, coverage, and timing.

[3] Fees and royalties from U.S. direct investments abroad or from foreign direct investments in the United States are excluded from investment income and included in other services, net.

[4] In concept, balance on goods and services is equal to net exports and imports in the national income and product accounts (and the sum of balance on current account and allocations of special drawing rights is equal to net foreign investment in the accounts), although the series differ because of different handling of certain items (gold, capital gains and losses, etc.), revisions, etc.

See next page for continuation of table.

TABLE B–102.—*U.S. international transactions, 1946–87*—Continued

[Millions of dollars; quarterly data seasonally adjusted, except as noted]

Year or quarter	U.S. assets abroad, net [increase/capital outflow (−)]				Foreign assets in the U.S., net [increase/capital inflow (+)]			Allocations of special drawing rights (SDRs)	Statistical discrepancy	
	Total	U.S. official reserve assets[6]	Other U.S. Government assets	U.S. private assets	Total	Foreign official assets	Other foreign assets		Total (sum of the items with sign reversed)	Of which: Seasonal adjustment discrepancy
1946	......	−623	......	......	......	......	......	......	......	......
1947	......	−3,315	......	......	......	......	......	......	......	......
1948	......	−1,736	......	......	......	......	......	......	......	......
1949	......	−266	......	......	......	......	......	......	......	......
1950	......	1,758	......	......	......	......	......	......	......	......
1951	......	−33	......	......	......	......	......	......	......	......
1952	......	−415	......	......	......	......	......	......	......	......
1953	......	1,256	......	......	......	......	......	......	......	......
1954	......	480	......	......	......	......	......	......	......	......
1955	......	182	......	......	......	......	......	......	......	......
1956	......	−869	......	......	......	......	......	......	......	......
1957	......	−1,165	......	......	......	......	......	......	......	......
1958	......	2,292	......	......	......	......	......	......	......	......
1959	......	1,035	......	......	......	......	......	......	......	......
1960	−4,099	2,145	−1,100	−5,144	2,294	1,473	821	......	−1,019	......
1961	−5,538	607	−910	−5,235	2,705	765	1,939	......	−989	......
1962	−4,174	1,535	−1,085	−4,623	1,911	1,270	641	......	−1,124	......
1963	−7,270	378	−1,662	−5,986	3,217	1,986	1,231	......	−360	......
1964	−9,560	171	−1,680	−8,050	3,643	1,660	1,983	......	−907	......
1965	−5,716	1,225	−1,605	−5,336	742	134	607	......	−457	......
1966	−7,321	570	−1,543	−6,347	3,661	−672	4,333	......	629	......
1967	−9,757	53	−2,423	−7,386	7,379	3,451	3,928	......	−205	......
1968	−10,977	−870	−2,274	−7,833	9,928	−774	10,703	......	438	......
1969	−11,585	−1,179	−2,200	−8,206	12,702	−1,301	14,002	......	−1,516	......
1970	−9,337	2,481	−1,589	−10,229	6,359	6,908	−550	867	−219	......
1971	−12,475	2,349	−1,884	−12,940	22,970	26,879	−3,909	717	−9,779	......
1972	−14,497	−4	−1,568	−12,925	21,461	10,475	10,986	710	−1,879	......
1973	−22,874	158	−2,644	−20,388	18,388	6,026	12,362	......	−2,654	......
1974	−34,745	−1,467	[5] 366	−33,643	34,241	10,546	23,696	......	−1,458	......
1975	−39,703	−849	−3,474	−35,380	15,670	7,027	8,643	......	5,917	......
1976	−51,269	−2,558	−4,214	−44,498	36,518	17,693	18,826	......	10,544	......
1977	−34,785	−375	−3,693	−30,717	51,319	36,816	14,503	......	−2,023	......
1978	−61,130	732	−4,660	−57,202	64,036	33,678	30,358	......	12,521	......
1979	−64,331	−1,133	−3,746	−59,453	38,752	−13,665	52,416	1,139	25,431	......
1980	−86,118	−8,155	−5,162	−72,802	58,112	15,497	42,615	1,152	24,982	......
1981	−110,951	−5,175	−5,097	−100,679	83,032	4,960	78,072	1,093	19,942	......
1982	−121,153	−4,965	−6,131	−110,058	93,746	3,593	90,154	......	36,085	......
1983	−49,777	−1,196	−5,006	−43,576	84,869	5,845	79,023	......	11,154	......
1984	−22,291	−3,131	−5,476	−13,685	102,467	2,987	99,481	......	26,837	......
1985	−31,399	−3,858	−2,831	−24,711	129,872	−1,140	131,012	......	17,920	......
1986	−95,982	312	−1,920	−94,374	213,386	34,698	178,689	......	23,947	......
1985: I	−1,745	−233	−782	−730	16,423	−11,060	27,484	......	11,535	1,725
II	−1,551	−356	−1,067	−128	25,202	8,606	16,596	......	5,724	−1,712
III	−6,936	−121	−435	−6,380	35,020	2,426	32,594	......	455	−3,781
IV	−21,167	−3,148	−547	−17,473	53,227	−1,111	54,338	......	205	3,766
1986: I	−13,770	−115	−240	−13,415	36,322	2,576	33,746	......	10,488	2,294
II	−25,529	16	−242	−25,303	49,042	15,568	33,475	......	10,241	−2,044
III	−24,478	280	−1,454	−23,304	69,591	15,551	54,040	......	−8,530	−4,153
IV	−32,204	132	15	−32,351	58,431	1,003	57,428	......	11,750	3,904
1987: I	15,533	1,956	225	13,352	26,754	13,953	12,802	......	−5,504	2,652
II	−14,895	3,419	−177	−18,137	49,564	10,070	39,494	......	6,521	−2,009
III *p*	−29,203	32	232	−29,467	68,009	359	67,650	......	4,572	−5,177

[5] Includes extraordinary U.S. Government transactions with India.

[6] Consists of gold, special drawing rights, foreign currencies, and the U.S. reserve position in the International Monetary Fund (IMF).

Note.—Quarterly data for U.S. official reserve assets and foreign assets in the United States are not seasonally adjusted.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–103.—*U.S. merchandise exports and imports by principal end-use category, 1965–87*

[Billions of dollars; quarterly data seasonally adjusted]

Year or quarter	Exports							Imports						
	Total	Agricultural products	Nonagricultural products					Total	Petroleum and products	Nonpetroleum products				
			Total	Industrial supplies and materials	Capital goods except automotive	Automotive	Other			Total	Industrial supplies and materials	Capital goods except automotive	Automotive	Other
1965	26.5	6.3	20.2	7.6	8.1	1.9	2.6	21.5	2.0	19.5	9.1	1.5	0.9	8.0
1966	29.3	6.9	22.4	8.2	8.9	2.4	2.9	25.5	2.1	23.4	10.2	2.2	1.8	9.2
1967	30.7	6.5	24.2	8.5	9.9	2.8	3.0	26.9	2.1	24.8	10.0	2.5	2.4	9.9
1968	33.6	6.3	27.3	9.6	11.1	3.5	3.2	33.0	2.4	30.6	12.0	2.8	4.0	11.8
1969	36.4	6.1	30.3	10.4	12.4	3.9	3.7	35.8	2.6	33.2	11.7	3.4	5.1	13.0
1970	42.5	7.4	35.1	12.3	14.7	3.9	4.3	39.9	2.9	36.9	12.3	4.0	5.7	15.0
1971	43.3	7.8	35.5	10.9	15.4	4.7	4.5	45.6	3.6	41.9	13.6	4.3	7.6	16.5
1972	49.4	9.5	39.9	11.8	16.9	5.5	5.6	55.8	4.7	51.1	16.0	5.9	9.0	20.2
1973	71.4	18.0	53.4	16.9	22.0	7.0	7.6	70.5	8.4	62.1	19.2	8.3	10.7	23.9
1974	98.3	22.4	75.9	26.2	30.9	8.8	10.0	103.8	26.6	77.2	27.4	9.8	12.4	27.5
1975	107.1	22.2	84.8	26.7	36.6	10.8	10.7	98.2	27.0	71.2	23.6	10.2	12.1	25.3
1976	114.7	23.4	91.4	28.3	39.1	12.2	11.7	124.2	34.6	89.7	29.1	12.3	16.8	31.4
1977	120.8	24.3	96.5	29.7	39.8	13.5	13.5	151.9	45.0	106.9	35.0	14.0	19.4	38.6
1978	142.1	29.9	112.2	33.7	46.5	15.7	16.2	176.0	42.3	133.7	41.3	19.7	25.0	47.7
1979	184.5	35.6	148.9	51.8	58.8	18.4	19.8	212.0	60.5	151.5	48.5	25.0	26.4	51.6
1980	224.3	42.2	182.1	64.9	74.2	17.5	25.4	249.8	79.3	170.5	54.0	31.2	27.9	57.4
1981	237.1	44.0	193.1	63.3	81.6	19.8	28.3	265.1	77.8	187.3	57.4	36.7	30.9	62.3
1982	211.2	37.2	174.0	57.3	73.7	17.4	25.6	247.6	61.3	186.4	50.0	38.3	34.1	63.9
1983	201.8	37.1	164.7	52.2	68.9	18.7	24.9	268.9	55.0	213.9	54.7	43.1	43.5	72.6
1984	219.9	38.4	181.5	56.0	74.1	22.5	28.9	332.4	57.3	275.1	66.6	61.1	56.6	90.9
1985	215.9	29.6	186.4	54.1	76.4	25.0	30.9	338.1	50.4	287.7	62.6	64.0	65.0	96.1
1986	224.4	27.0	197.3	58.7	79.8	25.4	33.4	368.7	33.8	334.9	69.0	75.4	78.1	112.4
1985: I	55.1	8.2	46.9	13.6	19.2	6.1	7.9	79.9	10.8	69.1	15.6	15.6	14.8	23.1
II	54.0	7.5	46.6	13.2	19.2	6.4	7.8	84.0	13.2	70.8	15.8	15.7	15.8	23.6
III	53.4	6.8	46.6	13.6	18.9	6.4	7.6	84.6	12.3	72.2	15.7	15.7	16.8	24.1
IV	53.5	7.1	46.4	13.7	19.0	6.2	7.5	89.6	14.1	75.5	15.5	16.9	17.7	25.3
1986: I	53.9	7.0	46.8	13.4	19.2	6.4	7.9	88.9	10.2	78.6	17.1	17.4	17.8	26.4
II	56.9	6.3	50.6	16.0	19.6	7.0	8.0	90.6	7.6	83.0	17.7	18.7	19.1	27.4
III	56.5	6.6	49.9	15.0	20.5	5.9	8.6	93.6	7.9	85.7	16.7	19.5	20.7	28.9
IV	57.0	7.0	50.0	14.3	20.6	6.2	8.9	95.6	8.0	87.6	17.6	19.8	20.5	29.7
1987: I	57.0	6.5	50.5	14.3	20.2	6.3	9.6	95.7	8.7	87.1	16.9	19.8	20.6	29.8
II	60.1	7.2	52.9	15.3	20.8	6.4	10.4	99.7	10.0	89.7	16.4	21.3	21.1	30.9
III	65.3	8.4	56.9	16.0	23.6	6.3	10.9	105.1	12.6	92.5	17.7	22.3	21.3	31.2

Note.—Data are on an international transactions basis and exclude military.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B-104.—*U.S. merchandise exports and imports by area, 1978–87*

[Millions of dollars]

Item	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987 first 3 quarters at annual rate [1]
Exports	142,054	184,473	224,269	237,085	211,198	201,820	219,900	215,935	224,361	243,136
Industrial countries	87,948	115,930	137,152	141,900	127,254	128,353	140,994	140,517	151,125	160,982
Canada	31,229	38,690	41,626	46,016	39,203	44,512	53,037	55,390	56,984	59,796
Japan	12,960	17,629	20,806	21,796	20,694	21,789	23,241	22,145	26,361	26,949
Western Europe	39,546	54,177	67,603	65,108	59,701	55,448	56,867	56,015	60,664	66,961
Australia, New Zealand, and South Africa	4,213	5,434	7,117	8,980	7,656	6,604	7,849	6,967	7,116	7,276
Other countries, except Eastern Europe	50,213	62,630	82,941	90,657	80,130	70,426	74,583	71,968	71,211	79,834
OPEC [2]	14,846	14,556	17,368	21,097	20,651	15,256	13,771	11,409	10,484	10,408
Other [3]	35,367	48,074	65,573	69,560	59,479	55,170	60,812	60,559	60,727	69,426
Eastern Europe	3,893	5,913	4,143	4,440	3,749	2,976	4,290	3,258	2,025	2,320
International organizations and unallocated			33	88	65	65	33	192		
Imports	176,001	212,009	249,750	265,063	247,642	268,900	332,422	338,083	368,700	400,665
Industrial countries	99,344	112,797	127,884	144,322	144,139	159,893	205,526	219,102	246,098	252,909
Canada	33,756	39,227	42,901	48,253	48,523	55,982	67,630	70,394	70,315	71,763
Japan	24,540	26,260	31,216	37,597	37,683	42,844	60,210	65,653	80,764	82,961
Western Europe	36,608	41,817	47,235	52,864	52,900	55,623	72,054	77,454	89,074	92,692
Australia, New Zealand, and South Africa	4,440	5,493	6,532	5,608	5,033	5,443	5,632	5,601	5,945	5,493
Other countries, except Eastern Europe	74,397	96,131	119,135	119,188	102,414	107,593	124,679	117,134	120,622	145,859
OPEC [2]	33,286	45,039	55,602	49,934	31,517	25,282	26,852	22,680	18,894	23,440
Other [3]	41,111	51,092	63,533	69,254	70,897	82,311	97,827	94,454	101,728	122,419
Eastern Europe	1,508	1,896	1,444	1,553	1,066	1,413	2,217	1,847	1,980	1,897
International organizations and unallocated	752	1,185	1,287		23	1				
Balance (excess of exports +)	−33,947	−27,536	−25,481	−27,978	−36,444	−67,080	−112,522	−122,148	−144,339	−157,529
Industrial countries	−11,396	3,133	9,268	−2,422	−16,885	−31,540	−64,532	−78,585	−94,973	−91,927
Canada	−2,527	−537	−1,275	−2,237	−9,320	−11,470	−14,593	−15,004	−13,331	−11,967
Japan	−11,580	−8,631	−10,410	−15,801	−16,989	−21,055	−36,969	−43,508	−54,403	−56,012
Western Europe	2,938	12,360	20,368	12,244	6,801	−175	−15,187	−21,439	−28,410	−25,731
Australia, New Zealand, and South Africa	−227	−59	585	3,372	2,623	1,161	2,217	1,366	1,171	1,783
Other countries, except Eastern Europe	−24,184	−33,501	−36,194	−28,531	−22,284	−37,167	−50,096	−45,166	−49,411	−66,025
OPEC [2]	−18,440	−30,483	−38,234	−28,837	−10,866	−10,026	−13,081	−11,271	−8,410	−13,032
Other [3]	−5,744	−3,018	2,040	306	−11,418	−27,142	−37,015	−33,895	−41,001	−52,993
Eastern Europe	2,385	4,017	2,699	2,887	2,683	1,563	2,073	1,411	45	423
International organizations and unallocated	−752	−1,185	−1,254	88	42	64	33	192		

[1] Preliminary; seasonally adjusted.

[2] Algeria, Ecuador, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela.

[3] Latin American Republics, other Western Hemisphere, and other countries in Asia and Africa, less members of OPEC.

Note.—Data are on an international transactions basis and exclude military.

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B-105.—*U.S. merchandise exports and imports by commodity groups, 1970–87*

[Billions of dollars]

Year or month	Merchandise exports						Merchandise imports					Merchandise trade balance			
	Total domestic and foreign exports (adjusted and not adjusted to include undocumented exports to Canada) [1]		Domestic exports				General imports [5]					Exports (f.a.s.) less imports, customs value or f.a.s. value		Exports (f.a.s.) less imports, c.i.f. value	
	Adjusted	Not adjusted	Total [1] [2]	Food, beverages, and tobacco	Crude materials and fuels [3]	Manufactured goods [4]	Total [2]	Food, beverages, and tobacco	Crude materials and fuels [3]	Manufactured goods [4]	Total, (c.i.f. value) [6]	Adjusted	Not adjusted	Adjusted	Not adjusted
	F.a.s. value [7]						Customs value								
1970	43.2	42.7	42.0	5.1	6.7	29.3	40.0	6.2	6.5	25.9	42.4	3.2	2.7	0.8	0.2
1971	44.1	43.5	42.9	5.1	6.4	30.4	45.6	6.4	7.3	30.4	48.3	−1.5	−2.0	−4.3	−4.8
1972	49.9	49.2	48.4	6.6	7.1	33.7	55.6	7.4	8.8	37.8	58.9	−5.7	−6.4	−9.0	−9.7
1973	71.9	70.8	69.7	12.9	10.7	44.7	69.5	9.2	13.4	45.0	73.2	2.4	1.3	−1.3	−2.4
1974	99.3	98.0	96.6	15.2	15.8	63.5	101.4	10.7	31.8	56.2	108.4	−2.0	−3.4	−9.1	−10.4
							F.a.s. value [7]								
1974*	99.4	98.1	96.7	15.2	15.8	63.5	102.6	10.7	32.1	55.2	110.9	−3.1	−4.5	−11.4	−12.8
1975*	108.9	107.7	106.2	16.8	15.2	71.0	98.5	9.9	32.6	51.1	105.9	10.4	9.1	3.0	1.8
1976*	116.8	115.2	113.5	17.2	16.1	77.2	123.5	11.9	41.5	64.8	132.5	−6.7	−8.3	−15.7	−17.3
1977*	123.2	121.2	119.0	16.0	18.6	80.2	150.4	14.2	53.6	76.6	160.4	−27.2	−29.2	−37.2	−39.2
1978*	145.8	143.7	141.1	20.6	21.0	94.5	174.8	15.7	51.9	100.3	186.0	−28.9	−31.1	−40.2	−42.4
1979*	186.4	181.9	178.6	24.6	28.2	116.6	209.5	17.7	71.4	112.2	222.2	−23.1	−27.6	−35.9	−40.4
1980	225.6	220.6	216.5	30.4	33.7	143.9	244.9	18.6	94.0	125.1	257.0	−19.3	−24.2	−31.4	−36.4
							Customs value								
1981	238.7	233.7	228.9	33.2	33.0	154.3	261.0	18.4	92.9	142.5	273.4	−22.3	−27.3	−34.6	−39.7
1982	216.4	212.2	207.1	27.0	33.5	139.7	244.0	17.8	74.4	144.0	254.9	−27.5	−31.8	−38.4	−42.6
1983	205.6	200.5	195.9	27.0	29.6	132.4	258.0	18.8	68.0	163.4	269.9	−52.4	−57.6	−64.2	−69.3
1984	224.0	218.7	212.0	27.3	31.5	143.1	325.7	21.6	72.8	221.5	346.4	−101.7	−107.0	−122.4	−127.6
1985	218.8	212.8	206.9	22.2	28.3	145.4	345.3	22.4	65.0	246.8	352.5	−126.5	−132.5	−133.6	−139.7
1986	226.8	216.6	206.4	20.2	26.5	148.7	366.1	24.7	48.3	282.1	383.0	−139.3	−149.4	−156.2	−166.3
1986:															
Jan	....	17.0	16.5	1.8	2.5	11.4	30.1	2.2	6.2	22.5	31.5	....	−13.0	....	−14.4
Feb	....	17.4	17.2	1.7	2.4	12.2	27.5	1.9	4.7	21.3	28.8	....	−10.1	....	−11.4
Mar	....	18.6	18.3	1.7	2.3	13.3	29.4	2.1	4.3	24.3	30.7	....	−10.8	....	−12.2
Apr	....	18.0	17.4	1.5	2.4	12.6	30.9	2.0	3.2	22.2	32.3	....	−12.9	....	−14.3
May	....	18.3	16.7	1.4	2.2	12.3	30.0	2.3	3.7	23.0	31.4	....	−11.8	....	−13.1
June	....	19.1	16.4	1.4	1.8	12.3	30.9	1.9	4.2	24.0	32.3	....	−11.9	....	−13.3
July	....	17.3	15.9	1.6	1.8	11.6	31.8	2.1	4.0	26.6	33.4	....	−14.5	....	−16.1
Aug	....	16.9	16.8	1.8	2.0	12.0	29.5	1.9	3.4	23.1	30.9	....	−12.6	....	−14.0
Sept	....	17.5	16.9	1.7	2.0	12.3	30.8	2.0	3.9	21.8	32.3	....	−13.3	....	−14.7
Oct	....	19.6	18.6	1.9	2.3	13.4	32.8	1.9	3.5	23.5	34.3	....	−13.2	....	−14.7
Nov	....	18.4	17.9	1.9	2.3	12.8	32.4	2.3	3.9	28.3	33.8	....	−14.0	....	−15.4
Dec	....	18.5	17.8	1.9	2.4	12.6	29.9	1.9	3.4	21.4	31.3	....	−11.3	....	−12.7
1987:															
Jan	16.8	16.4	16.2	1.6	2.1	11.0	27.5	1.8	3.4	21.3	28.7	−10.7	−11.0	−11.9	−12.3
Feb	19.4	18.7	18.7	1.6	2.2	13.2	32.3	2.1	4.4	24.8	33.7	−12.9	−13.6	−14.4	−15.1
Mar	21.8	21.1	21.1	1.9	2.4	15.0	33.2	2.3	4.2	25.7	34.7	−11.4	−12.1	−12.9	−13.6
Apr	20.5	20.1	19.8	1.8	2.3	14.2	32.0	2.1	3.9	25.1	33.5	−11.5	−11.8	−13.0	−13.3
May	20.8	20.4	20.0	1.8	2.2	14.5	33.3	2.0	4.4	25.8	34.8	−12.5	−12.9	−14.0	−14.4
June	21.1	20.5	20.3	1.8	2.3	14.5	35.3	2.2	2.9	27.2	36.8	−14.1	−14.7	−15.7	−16.3
July	21.0	20.1	20.3	2.1	2.3	13.9	35.8	2.1	5.6	27.2	37.5	−14.8	−15.8	−16.5	−17.4
Aug	20.2	20.0	19.5	2.0	2.5	13.7	34.3	1.9	5.6	25.8	35.9	−14.1	−14.3	−15.7	−15.9
Sept	21.0	21.0	20.2	2.0	2.4	14.8	33.6	1.9	4.9	25.6	35.1	−12.6	−12.6	−14.1	−14.1
Oct	21.8	21.0	21.0	2.1	2.5	14.4	37.7	2.2	5.3	28.8	39.4	−16.0	−16.8	−17.6	−18.4
Nov	23.8	23.3	23.0	2.1	2.8	16.2	35.5	2.1	5.0	27.4	37.0	−11.7	−12.1	−13.2	−13.7

---

[1] Department of Defense shipments of grant-aid military supplies and equipment under the Military Assistance Program are excluded from total exports through 1985 and included beginning 1986.

[2] Total includes commodities and transactions not classified according to kind.

[3] Includes fats and oils.

[4] Includes machinery, transportation equipment, chemicals, metals, and other manufactures. Export data for these items include military grant-aid shipments through 1977 and exclude them thereafter.

[5] Total arrivals of imported goods other than intransit shipments.

[6] C.i.f. (cost, insurance, and freight) import value at first port of entry into United States. Data for 1967–73 are estimates.

[7] F.a.s. (free alongside ship) value basis at U.S. port of exportation for exports and at foreign port of exportation for imports.

Note.—Data are as reported by the Bureau of the Census adjusted to include silver ore and bullion reported separately prior to 1969. Trade in gold is included beginning 1974. Export statistics cover all merchandise shipped from the U.S. customs area, except supplies for the U.S. Armed Forces. Exports include shipments under Agency for International Development and Food for Peace programs as well as other private relief shipments.

Data beginning 1980 include trade of the U.S. Virgin Islands, except that for 1980 Virgin Islands exports are reflected only in the figures for domestic and foreign exports combined, total domestic exports, and trade balance.

*Data for 1974–79 for domestic and foreign exports combined, total domestic exports, total general imports, and trade balance include trade of the Virgin Islands.

Source: Department of Commerce (Bureau of the Census and International Trade Administration, Office of Trade and Investment Analysis, Trade Statistics Division).

TABLE B–106.—*International investment position of the United States at year-end, 1979–86*

[Billions of dollars]

Type of investment	1979	1980	1981	1982	1983	1984	1985	1986
Net international investment position of the United States	94.5	106.3	141.1	137.0	89.6	3.6	−111.9	−263.6
U.S. assets abroad	510.6	607.1	719.8	824.9	873.9	896.1	949.4	1,067.9
U.S. official reserve assets	19.0	26.8	30.1	34.0	33.7	34.9	43.2	48.5
Gold	11.2	11.2	11.2	11.1	11.1	11.1	11.1	11.1
Special drawing rights	2.7	2.6	4.1	5.3	5.0	5.6	7.3	8.4
Reserve position in the International Monetary Fund	1.3	2.9	5.1	7.3	11.3	11.5	11.9	11.7
Foreign currencies	3.8	10.1	9.8	10.2	6.3	6.7	12.9	17.3
U.S. Government assets, other than official reserve assets	58.4	63.8	68.7	74.6	79.5	84.9	87.7	89.4
U.S. loans and other long-term assets	56.5	62.0	67.2	72.9	77.8	82.9	85.8	88.6
Repayable in dollars	54.1	59.8	65.0	70.9	76.0	80.8	84.1	87.0
Other	2.4	2.2	2.2	1.9	1.8	1.8	1.7	1.6
U.S. foreign currency holdings and U.S. short-term assets	1.9	1.7	1.5	1.7	1.7	2.0	1.8	.9
U.S. private assets	433.2	516.6	621.1	716.4	760.7	776.3	818.5	929.9
Direct investment abroad	187.9	215.4	228.3	207.8	207.2	211.5	229.7	259.9
Foreign securities	56.8	62.7	63.4	75.5	83.8	89.1	112.8	131.1
Bonds	42.0	43.5	45.8	56.7	57.7	61.8	73.0	80.2
Corporate stocks	14.8	19.2	17.6	18.8	26.1	27.3	39.8	50.9
U.S. claims on unaffiliated foreigners reported by U.S. nonbanking concerns	31.5	34.7	35.9	28.6	35.1	30.1	28.6	32.6
U.S. claims reported by U.S. banks, not included elsewhere	157.0	203.9	293.5	404.6	434.5	445.6	447.4	506.4
Foreign assets in the United States	416.1	500.8	578.7	688.0	784.3	892.5	1,061.3	1,331.5
Foreign official assets in the United States	159.9	176.1	180.4	189.1	194.5	199.2	202.5	240.8
U.S. Government securities	106.6	118.2	125.1	132.6	137.0	143.0	143.4	177.4
U.S. Treasury securities	101.7	111.3	117.0	124.9	129.7	135.5	135.7	170.7
Other	4.9	6.9	8.1	7.7	7.3	7.5	7.7	6.7
Other U.S. Government liabilities	12.7	13.4	13.0	13.6	14.2	14.8	15.6	17.4
U.S. liabilities reported by U.S. banks, not included elsewhere	30.5	30.4	26.7	25.0	25.5	26.1	26.7	27.3
Other foreign official assets	9.9	14.1	15.5	17.9	17.7	15.2	16.7	18.7
Other foreign assets in the United States	256.3	324.8	398.3	498.9	589.8	693.3	858.8	1,090.7
Direct investment in the United States	54.5	83.0	108.7	124.7	137.1	164.6	184.6	209.3
U.S. Treasury securities	14.2	16.1	18.5	25.8	33.8	58.2	83.6	96.0
U.S. securities other than U.S. Treasury securities	58.6	74.1	75.1	93.0	113.7	127.3	206.6	309.5
Corporate and other bonds	10.3	9.5	10.7	16.7	17.3	32.8	82.5	142.1
Corporate stocks	48.3	64.6	64.4	76.3	96.4	94.6	124.1	167.4
U.S. liabilities to unaffiliated foreigners reported by U.S. nonbanking concerns	18.7	30.4	30.6	27.5	26.9	31.0	29.4	26.7
U.S. liabilities reported by U.S. banks, not included elsewhere	110.3	121.1	165.4	228.0	278.3	312.2	354.5	449.2

Source: Department of Commerce, Bureau of Economic Analysis.

TABLE B–107.—*International reserves, selected years, 1952–87*

[Millions of SDRs; end of period]

Area and country	1952	1962	1972	1982	1984	1985	1986	1987 November
All countries	49,388	62,851	147,323	361,505	440,189	438,487	451,848	526,803
Industrial countries	38,582	52,535	110,282	211,919	252,032	254,907	276,369	340,550
United States	24,714	17,220	12,112	29,918	33,517	38,412	39,790	35,171
Canada	1,944	2,561	5,572	3,428	3,246	2,982	3,348	5,751
Australia	920	1,168	5,656	6,053	7,869	5,528	6,202	6,623
Japan	1,101	2,021	16,916	22,001	27,811	25,173	35,394	57,360
New Zealand	183	251	767	577	1,824	1,454	3,084	2,169
Austria	116	1,081	2,505	5,544	5,070	5,080	5,778	6,019
Belgium	1,133	1,753	3,564	4,757	5,853	5,611	5,724	7,927
Denmark	150	256	787	2,111	3,127	4,999	4,116	7,205
Finland	132	237	664	1,420	2,854	3,481	1,528	4,640
France	686	4,049	9,224	17,850	24,227	27,071	28,579	24,542
Germany	960	6,958	21,908	43,909	44,282	43,735	45,626	58,875
Iceland	8	32	78	133	132	189	255	212
Ireland	318	359	1,038	2,390	2,412	2,689	2,658	3,267
Italy	722	4,068	5,605	15,108	23,548	16,531	18,674	23,023
Netherlands	953	1,943	4,407	10,723	10,961	11,354	10,687	12,939
Norway	164	304	1,220	6,272	9,596	12,711	10,281	11,196
Spain	134	1,045	4,618	7,450	12,709	10,686	12,581	20,909
Sweden	504	802	1,453	3,397	4,135	5,487	5,568	6,209
Switzerland	1,667	2,919	6,961	16,930	18,520	19,317	20,726	18,556
United Kingdom	1,956	3,308	5,201	11,904	10,297	12,373	15,726	27,911
Developing countries: Total	10,272	10,202	36,083	141,721	172,020	162,870	137,424	140,020
By area:								
Africa	1,786	2,110	3,962	7,686	7,185	8,678	7,393	7,346
Asia	3,721	2,658	7,171	36,712	52,692	47,063	43,333	45,870
Europe	966	1,348	6,425	7,666	10,847	10,588	11,190	12,156
Middle East	1,183	1,805	9,436	64,094	59,722	58,630	47,856	46,227
Western Hemisphere	2,616	2,282	9,089	25,563	41,574	37,912	27,653	28,420
Memo:								
Oil-exporting countries	1,699	2,030	9,956	67,163	69,605	69,325	51,898	49,790
Non-oil developing countries	8,573	8,172	26,127	74,557	102,415	93,545	85,527	90,230

Note.—International reserves is comprised of monetary authorities' holdings of gold (at SDR 35 per ounce), special drawing rights (SDRs), reserve positions in the International Monetary Fund, and foreign exchange. Data exclude U.S.S.R., other Eastern European countries, and Cuba (after 1960).

U.S. dollars per SDR (end of period) are: 1952 and 1962—1.00000; 1972—1.08571; 1979—1.31733; 1980—1.27541; 1982—1.10311; 1983—1.04695; 1984—.98021; 1985—1.09842; 1986—1.22319; and November 1987—1.37379.

Source: International Monetary Fund, *"International Financial Statistics."*

TABLE B–108.—*Foreign exchange rates, 1967–87*

[Currency units per U.S. dollar, except as noted]

Period	Belgium (franc)	Canada (dollar)	France (franc)	Germany (mark)	Italy (lira)	Japan (yen)
March 1973	39.405	0.9967	4.5063	2.8131	568.87	261.83
1967	49,689	1.0789	4.9206	3.9865	624.09	362.13
1968	49.936	1.0776	4.9529	3.9920	623.38	360.55
1969	50.142	1.0769	5.1999	3.9251	627.32	358.36
1970	49.656	1.0444	5.5288	3.6465	627.12	358.16
1971	48.597	1.0099	5.5098	3.4829	618.32	347.78
1972	44.019	.9907	5.0443	3.1885	583.68	303.12
1973	38.954	1.0002	4.4534	2.6714	582.39	271.30
1974	38.959	.9780	4.8106	2.5867	650.80	291.84
1975	36.799	1.0175	4.2876	2.4613	653.09	296.78
1976	38.608	.9863	4.7824	2.5184	833.55	296.45
1977	35.848	1.0633	4.9160	2.3236	882.76	268.62
1978	31.493	1.1405	4.5090	2.0096	849.12	210.38
1979	29.342	1.1713	4.2567	1.8342	831.10	219.02
1980	29.237	1.1693	4.2250	1.8175	856.20	226.63
1981	37.194	1.1990	5.4396	2.2631	1138.58	220.63
1982	45.780	1.2344	6.5793	2.4280	1354.00	249.06
1983	51.121	1.2325	7.6203	2.5539	1519.32	237.55
1984	57.749	1.2963	8.7355	2.8454	1756.11	237.45
1985	59.336	1.3658	8.9799	2.9419	1908.88	238.47
1986	44.662	1.3896	6.9256	2.1704	1491.16	168.35
1987	37.357	1.3259	6.0121	1.7981	1297.03	144.60
1986: I	48.075	1.4040	7.2137	2.3490	1600.31	187.91
II	45.850	1.3845	7.1422	2.2453	1540.65	169.97
III	43.126	1.3855	6.7814	2.0861	1436.95	155.88
IV	41.671	1,3849	6.5678	2.0047	1388.65	160.30
1987: I	38.146	1.3374	6.1288	1.8398	1307.05	153.16
II	37.463	1.3327	6.0284	1.8069	1300.29	142.71
III	38.176	1.3225	6.1345	1.8393	1331.21	147.07
IV	35.614	1.3111	5.7524	1.7050	1247.99	135.54

Period	Netherlands (guilder)	Sweden (krona)	Switzerland (franc)	United Kingdom (pound) [1]	Multilateral trade-weighted value of the U.S. dollar (March 1973=100)	
					Nominal	Real [2]
March 1973	2.8708	4.4276	3.2171	247.24	100.0	100.0
1967	3.6024	5.1621	4.3283	275.04	120.0	
1968	3.6198	5.1683	4.3163	239.35	122.1	
1969	3.6240	5.1701	4.3131	239.01	122.4	
1970	3.6166	5.1862	4.3106	239.59	121.1	
1971	3.4952	5.1050	4.1170	244.42	117.8	
1972	3.2097	4.7570	3.8186	250.34	109.1	
1973	2.7945	4.3618	3.1687	245.25	99.1	98.8
1974	2.6878	4.4386	2.9804	234.03	101.4	99.2
1975	2.5293	4.1530	2.5839	222.16	98.5	93.9
1976	2.6448	4.3579	2.5001	180.48	105.6	97.3
1977	2.4547	4.4801	2.4064	174.49	103.3	93.1
1978	2.1642	4.5206	1.7906	191.84	92.4	84.2
1979	2.0072	4.2892	1.6643	212.24	88.1	83.2
1980	1.9875	4.2309	1.6772	227.74	87.4	84.8
1981	2.4998	5.0659	1.9674	202.43	102.9	100.8
1982	2.6719	6.2838	2.0327	174.80	116.6	111.7
1983	2.8543	7.6717	2.1006	151.59	125.3	117.3
1984	3.2083	8.2706	2.3500	133.68	138.3	128.5
1985	3.3184	8.6031	2.4551	129.74	143.2	132.0
1986	2.4484	7.1272	1.7979	146.77	112.2	103.3
1987	2.0263	6.3468	1.4918	163.98	96.9	90.6
1986: I	2.6509	7.4187	1.9793	144.08	119.5	110.1
II	2.5294	7.2011	1.8659	150.92	114.2	104.6
III	2.3521	6.9772	1.6875	148.80	108.3	99.9
IV	2.2655	6.9192	1.6632	143.02	107.0	98.7
1987: I	2.0768	6.5106	1.5468	154.38	99.9	92.6
II	2.0368	6.3109	1.4923	164.15	97.0	90.3
III	2.0713	6.4404	1.5256	161.74	98.7	92.5
IV	1.9189	6.1246	1.4018	175.59	92.3	86.8

[1] Cents per unit of foreign currency.
[2] Adjusted by changes in consumer prices.

Source: Board of Governors of the Federal Reserve System.

TABLE B–109.—*Industrial production and consumer prices, major industrial countries, 1962–87*

Year or quarter	United States	Canada	Japan	European Community [1]	France	West Germany	Italy	United Kingdom
	Industrial production (1977=100) [2]							
1962	53.2	46.6	29.2	55.7	50	56.6	49.6	68.4
1963	56.3	49.6	32.5	58.1	56	58.2	54.0	70.7
1964	60.1	54.1	37.7	62.3	60	63.3	56.1	76.4
1965	66.1	58.7	39.2	64.9	61	66.9	58.7	78.6
1966	72.0	63.0	44.2	67.4	64	67.5	65.6	79.8
1967	73.5	65.5	52.8	68.5	66	65.5	70.7	80.4
1968	77.6	69.7	60.8	73.6	68	71.5	74.8	86.5
1969	81.2	74.5	70.4	80.5	75	80.6	77.6	89.5
1970	78.5	75.5	80.1	84.5	79	85.8	82.6	89.9
1971	79.6	79.6	82.3	86.4	84	87.5	82.2	89.5
1972	87.3	85.6	86.8	90.2	88	90.8	86.2	91.1
1973	94.4	94.7	99.0	96.8	95	96.7	94.5	99.2
1974	93.0	97.7	96.7	97.5	98	96.4	98.3	97.3
1975	84.8	91.9	86.5	91.0	91	90.5	89.6	92.1
1976	92.6	97.5	96.1	97.7	98	98.7	100.0	95.1
1977	100.0	100.0	100.0	100.0	100	100.0	100.0	100.0
1978	106.5	103.3	106.4	102.3	102	102.7	101.9	103.0
1979	110.7	109.7	113.9	107.4	107	107.7	108.8	106.9
1980	108.6	108.1	119.2	106.7	106	108.0	114.4	99.8
1981	111.0	108.6	120.4	104.2	106	106.2	112.6	96.4
1982	103.1	97.9	120.9	102.9	104	103.1	108.5	98.2
1983	109.2	104.3	125.1	104.3	104	104.1	105.8	101.7
1984	121.4	119.0	138.9	106.7	105	107.6	109.4	103.1
1985	123.7	125.2	145.1	110.2	106	112.9	110.9	107.9
1986	125.1	126.8	144.5	112.5	106	115.1	114.4	109.5
1987 [p]	129.8	....	....	....	....	....	....	....
1986: I	125.2	127.1	145.2	111.0	105	115.1	113.4	108.2
II	124.4	127.1	144.7	113.0	106	115.4	114.5	109.1
III	124.8	126.2	144.3	112.5	107	116.2	112.4	110.2
IV	125.9	127.0	144.2	113.3	106	115.2	113.5	110.6
1987: I	126.9	129.1	146.1	112.5	106	114.0	116.6	111.0
II	128.2	131.1	146.1	114.2	109	115.7	118.9	111.8
III	131.0	134.2	151.4	114.2	109	116.1	115.6	114.4
IV [p]	133.0	....	....	....	....	....	....	....
	Consumer prices (1967=100)							
1962	90.6	87.7	76.7	84.3	85.4	87.4	79.2	85.1
1963	91.7	89.2	82.5	87.6	89.5	89.9	85.1	86.8
1964	92.9	90.9	85.8	90.7	92.5	92.0	90.1	89.6
1965	94.5	93.1	91.6	94.1	94.8	95.0	94.2	93.9
1966	97.2	96.5	96.3	97.5	97.4	98.4	96.4	97.6
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	104.2	104.0	105.3	103.7	104.5	101.6	101.4	104.8
1969	109.8	108.8	110.9	107.9	111.3	103.5	104.1	110.3
1970	116.3	112.4	119.3	113.2	117.1	107.1	109.2	117.4
1971	121.3	115.6	126.5	120.2	123.5	112.7	114.4	128.5
1972	125.3	121.2	132.3	127.5	131.1	119.0	121.0	137.7
1973	133.1	130.3	147.9	138.2	140.7	127.2	134.0	150.2
1974	147.7	144.5	184.0	156.2	160.0	136.1	159.7	174.3
1975	161.2	160.1	205.8	176.7	178.9	144.2	186.8	216.5
1976	170.5	172.1	224.9	195.2	196.1	150.5	218.1	252.4
1977	181.5	185.9	243.0	214.3	214.5	156.0	255.2	292.4
1978	195.4	202.5	252.3	229.2	233.9	160.2	286.2	316.6
1979	217.4	221.0	261.3	250.0	259.1	166.9	328.5	359.0
1980	246.8	243.5	282.3	280.9	294.2	175.8	397.8	423.6
1981	272.4	273.9	296.2	312.1	332.7	186.9	472.4	473.9
1982	289.1	303.5	304.1	343.3	373.1	196.8	549.4	514.7
1983	298.4	321.0	309.7	373.0	407.9	203.3	631.8	538.3
1984	311.1	335.0	316.5	397.8	439.5	208.2	698.8	565.1
1985	322.2	348.2	323.0	420.8	465.1	212.8	758.9	599.5
1986	328.4	362.8	324.9	434.6	477.6	212.2	805.2	619.9
1987	345.7	378.6	....	....	....	212.8	....	645.6
1986: I	327.3	357.5	324.6	430.3	472.4	213.3	800.4	611.7
II	326.5	360.4	325.6	433.4	475.8	212.7	809.9	619.6
III	328.9	364.7	324.5	434.8	478.5	211.7	815.0	620.3
IV	330.8	368.4	324.4	438.2	481.4	211.0	825.0	628.1
1987: I	334.5	371.9	322.6	442.7	487.0	212.2	836.1	635.8
II	338.8	377.0	326.6	446.9	491.2	213.0	845.3	645.5
III	342.6	381.4	325.9	449.2	494.1	213.0	854.9	647.1
IV	345.6	384.0	....	....	....	213.0	....	654.1

---

[1] Consists of Belgium-Luxembourg, Denmark, France, Greece, Ireland, Italy, Netherlands, United Kingdom, West Germany, Portugal, and Spain. Industrial production prior to July 1981 excludes data for Greece, which joined the EC in 1981. Data for Portugal and Spain, which became members in January 1, 1986 are excluded prior to 1982.

[2] All data exclude construction. Quarterly data are seasonally adjusted.

Sources: Department of Commerce (International Trade Administration, Office of Trade and Investment Analysis, Trade Statistics Division) and Department of Labor (Bureau of Labor Statistics).

TABLE B–110.—*Civilian unemployment rate, and hourly compensation, major industrial countries, 1960–87*

[Quarterly data seasonally adjusted]

Year or quarter	United States	Canada	Japan	France	West Germany	Italy	United Kingdom
	Civilian unemployment rate (percent)[1]						
1960	5.5	6.5	1.7	1.6	1.1	3.7	2.2
1961	6.7	6.7	1.5	1.4	.6	3.2	2.0
1962	5.5	5.5	1.3	1.3	.6	2.8	2.7
1963	5.7	5.2	1.3	1.2	.5	2.4	3.3
1964	5.2	4.4	1.2	1.3	.4	2.7	2.5
1965	4.5	3.6	1.2	1.4	.3	3.5	2.1
1966	3.8	3.4	1.4	1.7	.3	3.7	2.3
1967	3.8	3.8	1.3	1.8	.3	3.4	3.3
1968	3.6	4.5	1.2	2.4	1.1	3.5	3.2
1969	3.5	4.4	1.1	2.2	.6	3.5	3.1
1970	4.9	5.7	1.2	2.5	.5	3.2	3.1
1971	5.9	6.2	1.3	2.7	.6	3.3	3.9
1972	5.6	6.2	1.4	2.8	.7	3.8	4.2
1973	4.9	5.5	1.3	2.7	.7	3.7	3.2
1974	5.6	5.3	1.4	2.9	1.6	3.1	3.1
1975	8.5	6.9	1.9	4.2	3.4	3.4	4.6
1976	7.7	7.1	2.0	4.5	3.4	3.9	5.9
1977	7.1	8.1	2.0	5.0	3.5	4.1	6.4
1978	6.1	8.3	2.3	5.4	3.3	4.1	6.3
1979	5.8	7.4	2.1	6.0	3.0	4.4	5.4
1980	7.1	7.5	2.0	6.4	2.9	4.4	7.0
1981	7.6	7.5	2.2	7.5	4.1	4.9	10.5
1982	9.7	11.0	2.4	8.3	5.8	5.4	11.3
1983	9.6	11.9	2.7	8.5	7.1	5.9	11.9
1984	7.5	11.3	2.8	9.9	7.4	5.9	11.7
1985	7.2	10.5	2.6	10.4	7.5	6.0	11.2
1986	7.0	9.6	2.8	10.7	7.2	6.3	11.1
1987	6.2	8.9	....	11.1	7.2	....	10.0
1986: I	7.0	9.7	2.7	10.5	7.4	6.2	11.2
II	7.2	9.6	2.8	10.7	7.3	6.3	11.2
III	7.0	9.7	2.9	10.8	7.2	6.0	11.2
IV	6.8	9.4	2.9	10.8	7.0	6.6	10.9
1987: I	6.6	9.6	3.0	11.2	7.1	6.7	10.7
II	6.3	9.1	3.1	11.2	7.2	6.7	10.3
III	6.0	8.8	2.8	11.1	7.2	6.8	9.8
IV	5.9	8.2	....	10.8	7.3	....	9.2
	Manufacturing hourly compensation in U.S. dollars (1977=100)[2]						
1960	36.5	30.1	6.6	15.1	10.5	11.9	24.4
1961	37.6	29.6	7.7	16.7	12.2	13.2	26.0
1962	39.0	28.9	8.8	18.5	13.9	15.6	27.4
1963	40.2	29.8	9.8	20.2	14.8	18.5	28.5
1964	41.9	31.0	11.0	21.9	16.1	20.6	30.4
1965	42.7	32.8	12.4	23.8	17.6	21.9	33.3
1966	44.6	35.5	13.6	25.1	19.1	22.9	36.0
1967	46.9	37.6	15.3	27.0	20.2	25.4	36.5
1968	50.2	40.5	17.8	30.4	21.7	27.1	34.1
1969	53.7	43.8	21.3	30.8	24.1	30.8	37.2
1970	57.4	48.8	25.3	32.5	30.5	36.8	43.0
1971	60.9	54.3	30.2	36.8	35.9	43.1	50.7
1972	64.2	59.4	39.8	44.2	43.4	52.3	59.8
1973	68.8	63.7	54.5	57.8	59.1	66.4	66.8
1974	76.2	75.0	66.4	63.3	69.1	74.0	76.4
1975	85.1	82.5	76.0	87.9	79.9	95.0	96.8
1976	92.1	97.3	81.9	91.3	84.2	89.5	91.3
1977	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1978	108.2	100.3	137.0	123.4	124.8	119.1	127.5
1979	118.6	107.6	139.2	148.3	147.0	143.1	167.2
1980	132.4	119.3	143.2	172.9	160.7	165.3	223.2
1981	145.2	133.9	157.6	155.5	138.6	153.8	225.0
1982	157.5	143.8	146.9	152.4	134.8	155.4	209.6
1983	162.4	152.8	158.6	145.3	134.8	164.3	195.0
1984	168.0	152.1	163.5	139.2	126.9	158.1	182.9
1985	176.9	151.5	170.7	146.3	130.1	160.6	189.3
1986	182.7	154.7	250.2	198.2	184.5	214.4	230.0
1987	185.1	....	....	....	....	....	....

---

[1] Civilian unemployment rates, approximating U.S. concepts. Quarterly data for France, West Germany, and United Kingdom should be viewed as less precise indicators of unemployment under U.S. concepts than the annual data. Beginning 1977, changes in the Italian survey resulted in a large increase in persons enumerated as unemployed. However, many also reported that they had not actively sought work in the past 30 days. Such persons have been provisionally excluded for comparability with U.S. concepts; their inclusion would about double the rates shown for Italy. There is a break in the series for West Germany as of 1983; based on the former series, the rate for 1983 was 7.4 percent.

[2] Hourly compensation in manufacturing, U.S. dollar basis. Data relate to all employed persons (wage and salary earners and the self-employed) in the United States and Canada, and to all employees (wage and salary earners) in the other countries. For France and United Kingdom, compensation adjusted to include changes in employment taxes that are not compensation to employees, but are labor costs to employers.

Source: Department of Labor, Bureau of Labor Statistics.

TABLE B-111.—*Growth rates in real gross national product, 1961–87*

[Percent change]

Area and country	1961–65 annual average	1966–70 annual average	1971–75 annual average	1976–80 annual average	1981	1982	1983	1984	1985	1986	1987 [1]
OECD countries [2]	5.3	4.6	3.0	3.3	2.1	−0.2	2.7	4.7	3.2	2.7	2.8
United States	4.6	3.0	2.2	3.4	1.9	−2.5	3.6	6.8	3.0	2.9	2.9
Canada	5.3	4.6	5.2	3.7	3.0	−3.4	3.7	6.1	4.3	3.0	3.7
Japan	12.4	11.0	4.3	5.0	3.7	3.1	3.2	5.1	4.7	2.5	3.6
European Community [3]	4.9	4.6	2.9	3.0	.2	.8	1.5	2.4	2.6	2.6	2.3
France	5.9	5.4	4.0	3.6	1.2	2.5	.7	1.4	1.7	2.1	1.6
West Germany	4.7	4.2	2.1	3.4	.0	−1.0	1.9	3.3	2.0	2.5	1.7
Italy	4.8	6.6	2.4	3.8	1.1	.2	.5	3.5	2.7	2.7	2.7
United Kingdom	3.2	2.5	2.1	1.7	−1.2	1.0	3.7	2.2	3.7	2.3	3.5
Developing countries	5.3	5.8	5.7	5.0	2.2	.9	.5	2.8	1.7	4.0	3.3
Communist countries [4]	4.4	5.0	4.2	2.8	2.0	2.6	2.7	2.3	2.3	4.1	([5])
U.S.S.R.	4.7	5.0	3.0	2.3	1.3	2.7	3.2	1.5	.8	3.8	1.0
Eastern Europe	3.9	3.8	4.9	1.9	−1.0	.9	1.9	3.5	.5	2.7	2.0
China	−.2	8.3	5.5	6.1	4.9	8.3	9.1	12.0	12.0	7.5	9.5

[1] Preliminary estimates.

[2] OECD (Organization for Economic Cooperation and Development) includes Australia, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, and United Kingdom, not shown separately.

[3] Includes Belgium, Denmark, Greece, Ireland, Luxembourg, Netherlands, Portugal, and Spain, not shown separately.

[4] Includes North Korea and Yugoslavia, not shown separately.

[5] Not available.

Sources: Department of Commerce, International Monetary Fund, Organization for Economic Cooperation and Development, and Council of Economic Advisers.